COMMITTEE HEARING

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)
	)
Draft Strategic Plan for	)
Distributed Generation	)
_____	)

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

WEDNESDAY, MAY 22, 2002

9:00 a.m.

Reported by:
Valorie Phillips
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COMMITTEE MEMBERS and ADVISORS PRESENT

Robert Laurie, Presiding Member

Robert Pernell, Associate Member

Scott Tomashefsky, Advisor

Mignon Marks, Advisor

Ellen Townsend-Smith, Advisor

ALSO PRESENT

Manuel Alvarez
Southern California Edison Company

Dennis M. Keane
Pacific Gas and Electric Company

Stephen R. Torres
FuelCell Energy

Kurt Kammerer
San Diego Regional Energy Office

Jeffrey D. Byron
Byron Consulting Group
Silicon Valley Manufacturing Group'

Julie Blunden
Xenergy

Al Figueroa
VFL Energy Technologies, Inc.

David M. Goldberg
American DG

Craig Hoellwarth
Green,Inc.

John Lang
Kawasaki Gas Turbines - Americas

Loren Kaye
Polisgroup

ALSO PRESENT

Jonathan M. Teague
Department of General Services

John Martini
California Independent Petroleum Association

Ken Krich
Sustainable Conservation

Edan Prabhu
FlexEnergy

Eric R. Wong
Cummins West, Inc.

Jan E. McFarland
Emergent Energy Group

Jean-Pierre Batmale
RealEnergy

John White
Center for Energy Efficiency and Renewable
Technologies and
Natural Resources Defense Council

Robert Y. Redlinger
CMS Viron Energy Services

Gerome G. Torribio
Southern California Edison Company

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P R O C E E D I N G S

9:00 a.m.

PRESIDING MEMBER LAURIE: Ladies and gentlemen, good morning. My name is Robert Laurie, Commissioner at the Energy Commission, Presiding Member of the Siting Committee which has jurisdiction over this distributed generation draft strategic plan.

To my right is my colleague on the Committee, Commissioner Pernell. To Commissioner Pernell's right is Commissioner Pernell's Advisor, Ellie Townsend-Smith, and to my left is my Advisor, Mignon Marks.

We have prepared for your input a draft strategic plan on distributed generation, and we're here today to discuss the contents thereof and get your thoughts on the subject.

In order to accomplish that I intend to turn the administration of this meeting over to Scott Tomashefsky, who will review the agenda and run with the agenda. But before doing so, I'd ask my colleague, Commissioner Pernell, for any opening comments that you may have, sir.

COMMISSIONER PERNELL: Thank you, Commissioner Laurie. I just want to welcome

everyone, and I'm sure we'll have a very productive day. We are interested in your comments, as Commissioner Laurie has said, and without any long presentation from me, we can get started.

So, Commissioner Laurie.

PRESIDING MEMBER LAURIE: Thank you, Robert. Scott.

MR. TOMASHEFSKY: Thank you. Good morning. I guess I'll do the long presentations today. Please cut me off if you think it's too long.

Good morning to everyone. Thanks for showing up at 9:00. What I'd like to do, the agendas are on the back table. Just to --

PRESIDING MEMBER LAURIE: I don't know, are the agendas on the back table?

MS. MARKS: Yes, they are.

MR. TOMASHEFSKY: I'm looking for affirmation of that comment.

PRESIDING MEMBER LAURIE: They are, okay. Thank you.

MR. TOMASHEFSKY: Great. And just to go over the agenda fairly briefly, what I'm going to do in the next 15, 20 minutes or so is I'm going

to give you an overview. For those of you that have not looked at the report, it will provide you a little snapshot of what's in the report. But just give you a general overview on what the report's all about.

And then we'll get some comments and discussion from a number of folks we invited, although we're not certainly restricting comments to just those particular panel members. We wanted to make sure that we at least had five people show up this morning, so by inviting them, as opposed to just having people come. At least you guarantee attendance that way. So that's a good thing.

PRESIDING MEMBER LAURIE: That's what I always used to have to do with my parties, you know, to make sure people would show up. Pay them.

(Laughter.)

MR. TOMASHEFSKY: So, we'll look for some comments from representatives. Manuel from Edison; Dennis Keane from PG&E; Steven Torres, Kurt Kammerer and Jeff Byron.

Mignon, did you say that -- is not going to be here?

MS. MARKS: Right.

MR. TOMASHEFSKY: Okay.

PRESIDING MEMBER LAURIE: Who's here from Edison?

MR. TOMASHEFSKY: Manuel Alvarez.

PRESIDING MEMBER LAURIE: Mr. Alvarez, you're going to be here and attempt to speak on behalf of Edison this morning?

MR. ALVAREZ: Yes, sir.

(Laughter.)

PRESIDING MEMBER LAURIE: Okay, can't wait for that.

MR. TOMASHEFSKY: Perhaps while we're doing housekeeping here, if those individuals could just come up to the front table, and be ready to speak that would be great.

And then after that we'll open it up for additional comment and see where that goes.

Following that discussion we also wanted to take advantage of folks being in attendance to discuss the exit fee issue that is currently up for testimony development in a PUC proceeding.

And the idea here was not to overstep our jurisdictional boundaries and deal with the evidentiary hearing, but we thought it would be a

good idea, not only for our own purposes of developing our own testimony, but to have an opportunity for folks to talk about it just in a general open forum, so they can use that for purposes of developing their own testimony.

And if that increases the efficiency of the evidentiary hearings at the PUC, then it's been worth our while. So we're going to have that discussion. And we may have Commissioner Boyd join us at that time, depending on his schedule.

So we should be done by 1:00 or sooner, depending on your desires. Okay.

PRESIDING MEMBER LAURIE: Why don't you go ahead and -- does anybody have any questions before we get into the contents of the strategic plan?

Okay, Scott, go ahead.

MR. TOMASHEFSKY: Okay, now the requirement is that if you're sleeping at the end of this presentation you'll be asked to answer a series of questions, so keep that in mind.

For those of you who have been following this since the outset we have been on a fairly aggressive timetable to put a strategic plan in play and get this thing adopted.

The concept actually began before December of last year, although the formal endorsement of the plan was provided at a business meeting in late December, which gave oversight to the Siting Committee, which followed with a workshop and some draft outlines being released and the Committee report that you have in draft form.

And we've also had a number of written comments. I'll make reference to who's submitted comments to this point later on in this discussion.

Also, there aren't any copies of this available on the back table, but we'll post this presentation on the web after this meeting. And you can download it that way, or if you want to, just send me an email or leave your card, and we'll make sure that you get a copy of this.

The basic timetable for adoption of this report is expectation is at the June 12th business meeting. So, between now and issuing a final Committee report, we'll have that schedule working.

So when we start talking about the vision and mission of the draft plan, and it's

kind of the underlying premise of a strategic plan, what we're looking to do is with the vision we're saying that DG would be an integral part of the energy system. And that we are positioning ourselves to become really the leader of that statewide effort and promote DG when it benefits consumers, the grid and the environment.

The important thing to note here is that we're not intending to do that for the purpose of promoting dg. We want to make sure that it makes sense to do that. And if it doesn't make sense to do that we won't do that.

There's a lot of investment right now in determining whether DG benefits consumers, the grid and the environment. So, that's our basic mission.

PRESIDING MEMBER LAURIE: And so when we say DG will be an integral part, it is my understanding of that statement that we are not indicating it's going to be 50 percent or 20 percent or 2 percent, because an integral part, under the vision statement, is an undefined integral, yet -- and integral, to me, means essential and important. But it doesn't indicate a specified percentage of consumption, for

example?

MR. TOMASHEFSKY: That's right, and actually that raises some issues of clarification that we'll go on to later on with reference to that particular number. But, yes, you're correct.

So the basic principles that we have driving this plan, fairly straightforward. We've always been an advocate of consumer choice, the idea of protecting consumers. There's a notion of environmental protection, which is really paramount to our renewable program.

The notion of fuel and technology diversity, which is also paramount to our charter in terms of looking at alternatives. And also the notion of recognizing the need for private investment. The industry will not succeed without private investment, so as state government goes, we could provide all the incentives that are out there. But ultimately it's not going to happen unless private industry is behind it.

So, for the future success of this plan, we are not looking to do everything, and this plan does not offer that we will do everything. It offers that this is an approach that can work as long as we have a lot of collaboration between

agencies, industry and the like. So we're looking out to our sister agencies, if you will.

We have a series of eight near-term goals which are much more clearly defined than the mid-term and long-term goals. The point being near-term goals are really where we want to get the answers, and those answers will determine how much we deploy on mid- and long-term goals. So it's very important to understand that our near-term goals are really much more refined for that purpose.

The first goal really looks at having the Commission as a central repository of DG information. And we've spent a lot of time and effort over the last couple years to actually start that process already.

We've significantly enhanced our website. There's a lot of information on there in terms of technologies, regulatory issues, interconnection stuff. Even the strategic planning is part of that. And we're in the development phase, trying to figure out what a database would be.

We do collect a lot of data in terms of our data reporting regulations. Utilities provide

us with a significant amount of data. There's other information that we get from other forums. And we want to try and figure out what would be the most optimal way of using that data and making it available for folks to take advantage of.

So, again, all these goals, there's a basis behind it. A lot of the specifics are still things that we could develop over the next few years. It's not set in stone by any means.

And this funding of technical R&D. We're doing it right now. There's a lot of efforts in the PIER program that has focused a significant amount of dollars towards distributed generation research. With the intent of trying to define those tough questions about how wide scaled deployment works, and whether there's some issues associated with that.

I don't think that there's any question that anyone would say that the technology would not develop. It's a matter of dealing with the cost, the emissions, the efficiencies, and how it all fits together. So we need to have research to deal with those things. And it's a very good, near-term concept.

It also is consistent with Air Resources

Board, with their emissions regulations and guidance that is due to go into effect 1/1/2003. There's a mid-term review that looks at the continuing stringency of those regulations and whether they can be met. So a lot of the research that we're doing can answer those questions, as well.

One thing that is often missing in DG discussions is, well, sure you can get the cost down, but how does it fit in the marketplace; what's the market potential for dg. And it's very difficult to find that information anywhere. You can look to DOE and you'll find some information. Now with some of the exit fee discussions going on you'll find some small series of analyses that are looking at those numbers. And it's really something that needs to be developed.

And we've kind of thrown it into, well, -- at the Commission we've dealt with it historically on the demand side. Well, it's time to start re-thinking of that notion; see how we need to approach DG forecasting and how that works.

There's a lot of things. We've also started looking at microgrids and other things

that people may or may take issue with, but from a technological side, we have to go beyond the regulatory box that we're in in terms of what potential is there out there.

And then once we deal with the technical aspects, then we need to figure out how the regulatory aspects fit in; and whether we can take advantage of those things.

PRESIDING MEMBER LAURIE: Who are you seeking to portray on this slide, Mr. Tomashefsky?

(Laughter.)

MR. TOMASHEFSKY: I don't know. I guess it would be -- I probably shouldn't answer that question.

(Laughter.)

MR. TOMASHEFSKY: So, as long as your hand is not in the same position, we're okay.

Goal four is probably goal one to a lot of you. Barriers to the deployment of DG is something that has been talked about since 1996 on a serious basis. It's still talked about in light of all the various things that we're dealing with.

In the report there was some discussion about expanding net metering programs, and there was probably -- need a little bit of clarification

on that.

The two bullets that are in the middle, facilitating discussion surrounding net gross metering issues, we deal with and need to be addressed. And also the debate about expanding the net metering programs. We're not suggesting in the report that the programs should be expanded or should not be expanded. But it needs to be addressed, and it does have some implications in terms of opportunities for distributed generation. So that was more of a, let's call it an oversight and accidental removal of text that should have been put in there. So just for full disclosure, that's something that will be refined in the final report.

And, again, the policy debate, we'll have some of that discussion today.

I don't know who this icon's supposed to represent, either, but looks like a conflict thing. We've been doing this for about two and a half years. I've been personally involved in that that effort, as many of you have been.

And so the notion of what type of rules and regulations will minimize these conflicts is a major barrier. So there's really a relationship

to go for. But it's there for the offering. There's a lot of support, at least in terms of what we've read, for that. And people do keep showing up to these meetings, so there must be something that is desired.

So in terms of whatever objectives we can provide to make that effort better, that's great. And just keep in mind, again, all of these goals do not necessarily suggest that we do it by ourselves. Maybe some other agencies would take leads on that; and it's there to provide an envelope to how we think distributed generation should be approached in California in terms of state government.

Rather than bore you with three more charts, I thought I'd combine goals six through eight. The notion of establishing a state agency coordination group is something we really strongly feel is important, and really is some of the glue that holds this document together. Is that we use that as a basis for saying, okay, which agencies should do what, and how should we best use our resources to make these things happen.

The notion of consumer awareness is also very important, especially from an end user

perspective. There's a lack of understanding from the consumer, even when we provide them information on incentives, it's still not clear to many folks what that actually means, and who gets the incentives and what implications it has.

So, for the industry to be successful, or at least to have the opportunity to be successful, consumer awareness is very important. And state government can play a role in that, as well.

So that's all the near-term things. And if things go well in the near term, then we really start to deal with the mid-term and longer-term phase two, if you will, approach. We'll take another look on deployment and really push the notion of widescale deployment with the idea of bringing down, making the technologies such that it would not need incentives. So it would be a self-sustainable type of environment for distributed generation.

And many of you have told me that the interest is not in getting incentives forever; the interest is having an environment that allows you to sell your services, if it's efficient and cost effective.

We've had a lot of parties actually file comments. Here's about 13; I've gotten a couple more in my folder here that we need to add to that. We're very appreciative of those comments. Generally the comments are fairly supportive of the plan, so we really think, we like those comments quite a bit. But we still do take the comments of criticism; we're okay with those things, too.

So there are some concerns and suggested improvements; and some of the folks you'll hear from will probably talk about some of those issues. And we certainly are committed to making refinements as the Committee sees necessary to provide clarification, make the document a little bit better. There's certain level of technical clarifications that are absolutely relevant in our review of that, and we'll make those changes. And we'll put out an even better report on the 5th of June.

So, here's our next steps. We're going to incorporate comments; incorporate the comments that were written and both verbal today. The Committee will issue a report on June 5th. And that report will be up for full adoption by the

Commission at its June 12th business meeting.

And I think that is it.

PRESIDING MEMBER LAURIE: Okay. Ready for the panel?

MR. TOMASHEFSKY: Yes.

COMMISSIONER PERNELL: One question.

PRESIDING MEMBER LAURIE: Question.

COMMISSIONER PERNELL: Scott, on some of the written comments I've read it suggests and actually states that the Commission's goal and intent is to promote DG at any cost. And the any cost is the, I guess, the phrase that worries me.

And, I mean, just in -- you've done a great job in putting this together. And my question is, is that the intent, as you know it, to support dg, at any cost?

MR. TOMASHEFSKY: Not at all. In fact, if that's the way it reads then we need to clarify that. That's --

COMMISSIONER PERNELL: Well, that's not the way you wrote it. I'm just reading --

MR. TOMASHEFSKY: Yeah, that's not the way --

COMMISSIONER PERNELL: -- some comments that came in.

MR. TOMASHEFSKY: Right. No, the intent is, and that's why the stressing of the other side about provided makes sense to do so. It's really important. We're not here to promote DG for the sake of promoting dg. We're here to promote DG because we fundamentally have this understanding that there are potential benefits, and provided there are benefits that make economic sense and protect the environment, all those things that we've talked about.

If there's a benefit to having it installed, then we're well behind it. And I think that's the basic point. We're not there to say, well, we're going to go ahead and put x amount of DG out there just for the purpose of having it out there. That would not be good public policy at all.

COMMISSIONER PERNELL: Thank you.

PRESIDING MEMBER LAURIE: But the point is that in examining the benefits of distributed generation, what we're talking about is cost/benefit analysis is not the only consideration.

That is, there may be reliability benefits that are more difficult to quantify.

There may be environmental benefits that are more difficult to quantify. There may be long-term diversity benefits that may be more difficult to quantify.

But, yet, we've also indicated that cost/benefit is a very relevant factor, have we not?

MR. TOMASHEFSKY: Absolutely. Absolutely. We've also stressed we've promoted the notion of a systems approach to things. It's not just -- when you're looking at solutions it's not just distributed generation, it's energy efficiency and other things that are available.

And, so this becomes one element of the package of goods. And it's important to have that as one element of the package of goods. And that's really what we're promoting.

PRESIDING MEMBER LAURIE: Any other questions?

COMMISSIONER PERNELL: No. I would agree with that analysis versus others that I've read that we're just promoting this at any cost, which in my mind also includes health benefits and other public safety benefits.

So I don't want it to be presumed that

we're just going down this road with blinders on. But that we're looking at the whole effects of DG across the board.

MR. TOMASHEFSKY: That promotion is fundamental to what the Commission does. We are in the business of promoting alternatives and not putting eggs in one basket.

I want to acknowledge that this report, Mignon Marks, sitting next to Commissioner Laurie, has a lot to do with this report, as well. So I don't want to give the impression that this is my report, or in other words something that's been drafted through my work. Mignon's had an awful lot to do with that, as well as the Committee's had quite a bit of input, as well.

PRESIDING MEMBER LAURIE: Yeah, I thought it was the Committee's report.

MR. TOMASHEFSKY: It is the Committee's report.

(Laughter.)

MR. TOMASHEFSKY: But I just want to make sure that's clear for the record.

COMMISSIONER PERNELL: I think your point is well taken. I omitted Ms. Marks, and I apologize for that.

PRESIDING MEMBER LAURIE: Okay, do you want to introduce the panel again, and have the folks come forward.

MR. TOMASHEFSKY: Sure, if I can find my agenda. Okay, why don't, if it would work, if each of you would come up to the table. So, Manuel, if you would come up, and, Dennis, and Stephen, as well. And Kurt. And Jeff.

And I guess in terms of presentation I'll offer to make your lives somewhat easier, although that's with the caveat that I can actually get this stuff to work, that I can turn your slides and you can just stay there, if you have slides.

We did not require any slides or any presentation materials, but --

PRESIDING MEMBER LAURIE: Did you want to go -- is it your preference that we go in order, as suggested on the agenda?

MR. TOMASHEFSKY: If that's what you'd like to do, that's fine.

PRESIDING MEMBER LAURIE: Okay. Well, that's what we will do. And then go ahead and make your individual presentations, and then I would encourage a discussion by the panel, if you

want to do that.

i also want to make sure that public members of the audience know that simply because you're not sitting at the table today does not mean that we do not want to hear from you. To the contrary, we do, and we expect that. Or we would hope for that.

So, take good notes, and then after we hear from these folks we'll give you all a shot.

Mr. Alvarez, I have a question for you, sir.

MR. ALVAREZ: Yes, sir.

PRESIDING MEMBER LAURIE: I assume you're familiar with the comments submitted by your company?

MR. ALVAREZ: Yes, I am. Quite familiar.

PRESIDING MEMBER LAURIE: Would you turn to page 3. Mr. Montoya comments, citing our vision statement which says distributed generation will be an integral part of the California energy system providing consumers and energy providers with affordable, clean, reliable and readily accessible energy services.

The key portion of that statement is

that distributed generation will be an integral part of the energy system.

And you folks say that that is a premature statement. Are you serious about that?

MR. ALVAREZ: Commissioner, yes, we are. Actually, --

PRESIDING MEMBER LAURIE: So you don't think distributed generation can be defined today as something that should be an integral part of our energy system?

MR. ALVAREZ: I guess it's a question, you know, we're aware of what distributed generation has to offer, and what the proponents of distributed generation claim the benefits are.

But, one of the things you need to do in our position is that you should determine whether DG should be an integral part of that. That's the important question you have to ask.

This cost/benefit analysis you talked about this morning needs to be undertaken. And I don't believe that that full cost/benefit analysis is available in any kind of independent analysis. And that's actually one of the strengths that the Commission has, to say, these are the entire scope of costs and benefits.

If there's a point, and I want to make a distinction between the analysis that would be undertaken under a cost/benefit scheme versus a cost effectiveness analysis. Fundamentally, the test of cost effectiveness is nothing more than a truncated cost/benefit analysis that needs to be done.

PRESIDING MEMBER LAURIE: You don't think we know enough about distributed generation today to be able to make the statement that it should be an integral part of our energy system?

MR. ALVAREZ: I don't think you have the analysis before you. I don't think you have that full cost/benefit analysis before you to make that statement.

I think that's a gap that exists in providing that entire scope, that entire analysis you need before you, that independence. When the Commission serves as the analyst of the benefits and costs of a particular strategy, that document and that complete analysis should be available for all parties to look at. And I don't believe that that exists today. And --

PRESIDING MEMBER LAURIE: Okay, well, first of all, I would respectfully disagree that

we do not have enough data in front of us today to suggest that DG should be an integral part of our energy system. The nature and extent of that part, I concur, is something that needs to be analyzed and examined and determined over a period of time.

But I have absolutely no problem with the statement as it reads today. And the difficulty is that if that's Edison's position on the basic mission and vision, well, then that affects the credibility of all additional comments. Because if it is your view that there is no evidence today that DG is relevant and should be considered relevant, then that puts you a little alone among an awful lot of folks.

In any case, I apologize for interrupting your presentation. And, go ahead and offer your comments.

MR. ALVAREZ: I appreciate that --

COMMISSIONER PERNELL: Let me interrupt, also.

PRESIDING MEMBER LAURIE: Good. Thank you, Robert.

COMMISSIONER PERNELL: Mr. Alvarez, do you or your company think that the state should

have a multi-energy portfolio?

MR. ALVAREZ: Yes.

COMMISSIONER PERNELL: And wouldn't DG be part of that?

MR. ALVAREZ: Yes.

COMMISSIONER PERNELL: So, if I could follow up with Commissioner Laurie, it appears that you're saying that DG shouldn't be a part of, an integral part of the California energy mix.

MR. ALVAREZ: I don't think we're saying that it shouldn't be a part of it. The question becomes, you know, do you have the information before you to figure out how much of that analysis has to be done. And has that analysis been undertaken. And what are the full benefits and costs of DG. And I don't believe that that's been completed yet.

COMMISSIONER PERNELL: Well, whether it's been completed or not the premise is that it would be a part of the multi-energy mix of California.

MR. ALVAREZ: And I believe that that question is spread out in the entire scope of the entire regulatory system that's debating that question right now.

I believe you have a proceeding here and you have a proceeding at the PUC that's trying to deal with those kinds of issues. And I think that's ultimately the conclusion you want to reach.

But I believe you haven't reached that conclusion, yet. And part of it is some of the analysis needs to be undertaken.

We're aware of what has been done in the research and development realm of distributed generation. We understand where the technology is evolving, where it's moving to. And we understand some of the issues that are confronting DG.

But collecting that piece of information and conducting that information and doing that analysis that needs to be undertaken is, in fact, what's missing today in that discussion to formulate final conclusions on where DG fits and how it fits and how much it fits, et cetera.

COMMISSIONER PERNELL: But don't you think that's what this proceeding is about?

MR. ALVAREZ: Well, that's actually --

COMMISSIONER PERNELL: Collecting information from stakeholders and et cetera?

MR. ALVAREZ: -- actually I think that

gets to one of our points in our filing that we made to you. And the question was, you know, our understanding was that the strategic plan was, in fact, going to deal with the issues of distributed generation, and deal with some of those questions.

But when we look at the report what we end up finding basically, it's more of a question of the role of the state. And specifically, the role of the Energy Commission in that activity of DG.

So what we find ourselves discussing is basically the state's role, as opposed to where DG is within the technology development process. And that gets to the point where we filed in our testimony to you about this notion of advocating and promoting.

It was good to hear at least the clarifications this morning by Mr. Tomashefsky in terms of what promotion and advocacy, at least for the understanding from the Committee what that meant. But, as one read the report it seemed like it was more than that in terms of promoting and advocating a particular solution against all other options are available to meet the energy needs of the state.

COMMISSIONER PERNELL: Okay.

PRESIDING MEMBER LAURIE: You would have made a heck of a prosecutor.

(Laughter.)

PRESIDING MEMBER LAURIE: I'm glad I didn't have to go against you when I fought my traffic tickets.

Referring back to page 3, Manuel, see the Roman numeral III. The sentence above that, you have it?

MR. ALVAREZ: It kind of depends on how you printed it out what page you're on, so --

PRESIDING MEMBER LAURIE: Oh, okay.

MR. ALVAREZ: -- so I'm --

PRESIDING MEMBER LAURIE: Okay, the paragraph preceding Roman numeral III. The last sentence reads: SCE believes that the drafters may have confused the definition of distributed resources with the definition of distributed generation.

Can you differentiate for me the definition of distributed resources from the definition of distributed generation? And where the author of -- or where the drafter of your comments feels we have gone wrong in that regard.

MR. ALVAREZ: Well, you know, as we look at the distinction between distributed resources and distributed generation, the distributed resource definition is a lot broader than the generation of kilowatt hours or electricity.

The microturbines, the fuel cells, the PVs I would classify as generation technologies. Items and devices that produce electricity.

The distributed resources definition is broader than that, and may include other options. The DSM options, the energy management systems, et cetera, that would include.

The comment that I would make and to where the report perhaps confuses that, or at least brings that issue into discussion is the question of DSM issues. Where the question is raised that DG, distributed generation, should be addressed the same as DSM, or conservation.

We're not aware of any definition of distributed generation that includes DSM as part of that definitional category. And, in fact, when one looks at that, you know, basically one will say, well, yes, there are products that are not producing electricity, but are they classified as distributed generation. And we would say they are

not.

And so that kind of an issue is where it confronts that question of distributed resources are versus distributed generation.

PRESIDING MEMBER LAURIE: Okay. That's helpful, thank you. On your comment regarding whether this report speaks to the role of distributed generation or the role of government on the question of distributed generation, if you'll recall the premise upon which this report is based, is the fact that the State of California and its various agencies, in their decision-making, regulatory administrative authorities are making decisions affecting distributed generation.

And we have recognized that those decisions are inconsistent in a number of areas. So, one reason we wanted to approach this question of what, in fact, is the Energy Commission's role and the state's role, is to help develop good government in creating what might be a singular state thought on how to proceed with the general concept of distributed generation.

So I don't think it was the intent of this report to tell the distributed generation industry what their strategy should be. I think

this report dealt with the question of as representatives of the government structure, what is our responsibility on the question.

So, I think your point is noted. I would, however, suggest that this report serves our purpose in attempting to find what our responsibilities are, if any, on the question. Okay.

So, I'm sorry, did -- yes?

MR. ALVAREZ: Well, actually, you know, that gets to a more general point that I think is important to raise. I mean those of us who have been involved in kind of aligning, you know, the new regulatory structure with the new industry structure, you know, --

PRESIDING MEMBER LAURIE: Well, what is the new regulatory structure?

MR. ALVAREZ: Well, I'm dealing with those issues conceptually because over the last three years I'm not sure that we can figure out where the regulatory structure is, and where the industry structure is.

The recent two years of experience we've gone through in California have raised questions on both sides of that equation. So it is, in

fact, difficult. And, in fact, a perplexing problem for the state to kind of how to align those two trajectories of the industry and the state's responsibility.

And you're right, it's been a moving target. And that's been difficult.

PRESIDING MEMBER LAURIE: Thank you, Manuel. Did you have a report to give, Mr. Alvarez?

MR. ALVAREZ: Well, actually, you know, the questions that the Commissioners raised --

COMMISSIONER PERNELL: He already gave it.

MR. ALVAREZ: -- were actually summarized in my testimony, but, you know, I do want to raise a couple of issues, you know, that are in our filing and leave those for the Committee to ponder before they finalize their report and submit it to the full Commission for consideration.

Over the last few years, you know, we've all witnessed change in the electric market. And during that process I believe that SCE has been consistent in its policies on distributed generation.

Fundamentally, Southern California Edison supports the development of cost effective, safe, reliable and environmentally sound distributed generation which allows consumers to make informed choices about DG.

And I think we've been consistent with that over the last three, four years, since this proceeding and the proceeding at the Public Utilities Commission was undertaken.

But fundamentally, you know, the question of the role of the state is embedded in that particular point. And so that's where we want to kind of focus on, where we think the role of the state. And I've already mentioned to you, and in our questions, basically the role of advocacy and promotion. And I believe we've got some clarification on what that constitutes and what that really means as a pragmatic aspect of what we do with respect to distributed generation, so I won't linger on that point.

But there's a couple of items I want to raise to you that I think are important. The report talks about direct access and the difficulty that direct access causes to distributed generation.

But you have to remember that the State Legislature already determined that direct access, or suspension of direct access is in the public interest. And that's where we stand today. And you can't ignore that fact. Whether that's going to be revisited or not is an important question. And it's an item that you have to reflect, but that's where we stand as we currently visit this issue today.

COMMISSIONER PERNELL: And that was a legislative or administrative analysis?

MR. ALVAREZ: Well, if you look at AB-1X, the direction of where direct access, the suspension is, is embedded in AB-1X. And ultimately it was carried forward by the Public Utilities Commission.

And in terms of the specifics and -- and that's still under discussion today. And I guess later on this afternoon we'll talk about exit fees, which is part of another extension of that direct access issue.

PRESIDING MEMBER LAURIE: I hope you're going to stick around for that discussion.

MR. ALVAREZ: I'll be here. The DG costs and tariffs. We're not aware of any of

Southern California Edison's either business practice or tariffs discourage consumer choice to install DG. We don't think that exists today.

We think the tariffs are approved by the Public Utilities Commission. And, you know, unless we're obligated or directed by the PUC to encourage particular costs, we believe that that is not a viable option.

So the notion that tariffs and costs or some business practices of SCE are in fact hindering DG development, we don't believe that to be the case.

Under the general category of resource planning, at both the state and federal levels, we're concerned about the section in the report that discusses distributed resource planning at the distribution level.

PRESIDING MEMBER LAURIE: Do you have a page? If not, don't worry about it.

MR. ALVAREZ: Yeah, no, I didn't write it in my notes, I'm sorry.

Yeah, it's 21, item 4.

PRESIDING MEMBER LAURIE: Thank you.

MR. ALVAREZ: The issue of distribution planning has already been undertaken at the PUC.

And there is actually a report that discusses distribution planning and under the general category of resource planning. And I think the Commissioners at the PUC were fairly clear where they believe that issue was heading.

And in fact, in AB-995, the Legislature reaffirmed that the utility is responsible for the operating of its own electrical distribution system, including the grid, but not limited -- and it's not limited to owning, controlling, operating, managing and maintaining and planning for that expansion.

And so we believe that that's already been decided in terms of how that would be undertaken on the distribution planning level.

The issue of net metering surfaced in the staff's presentation. And there's actually two issues, and they both surfaced on the slide that was presented, that net and gross metering issue, which is basically, I guess, to sum it up, part of a federal matter. So it involves state and federal responsibilities that need to be addressed. And some of those issues have been raised at the PUC in that particular proceeding.

The issue of expanding net metering

proposals, you know, we stated in our testimony and we stated in other forums that we would oppose any expansion of net metering, basically on the basis that we believe it's a cost shifting responsibility -- strategy. It's an equity question that has to be addressed by the ratemaking authority in terms of who is responsible for those additional costs.

So, we're clear, and I believe we're straightforward on what our views are on expansion of the net metering issue.

The issue of municipal utility participation in DG. The report discusses public utilities within the context of the adoption of the rule 21 interconnection standards. Yet, we don't see any activity in terms of where public utilities or municipal utilities are required or indicated to embrace policies developed by the State of California for DG.

We're aware of the large programs that exist in the State of California for DG incentives. And yet, on the municipal side, we don't see a corresponding activity for DG development.

The issue of social benefits surfaces in

the report, which is part of what I believe your discussion was about this full cost/benefit analysis. And, in fact, probably an area that needs to be undertaken seriously.

There hasn't been that full cost/benefit analysis by which you can take what the costs are of DG, or the entire scope of benefits, and weigh them against each other. And I know that's a difficult task. I believe the Commission historically has tried to do that in another context. But it's something that needs to be done. And that's the independent analysis, I believe, where the Commission's strength and comparative advantage of doing that kind of analysis needs to be brought forth into the public arena. To say these are what the costs and benefits are.

That full accounting, if you will. That analysis and that strength of analyzing those things is what the Commission brings to the table to present those things.

COMMISSIONER PERNELL: And on that point, Manuel, would you agree that the cost/benefit analysis also includes some of the discussion that Commissioner Laurie talked about

earlier, which is, you know, the benefits to the whole system, the air quality, health and those?

MR. ALVAREZ: Yes.

COMMISSIONER PERNELL: So that's included in what you're talking about, not just hard costs?

MR. ALVAREZ: Right. Well, see, that gets into the definition, I believe, when analysts are doing their work. Where they're doing a full cost/benefit analysis and look at the entire scope of issues involved on both sides of that equation. Or they're just doing a cost effectiveness analysis, and just looking at, you know, the cost components, assuming benefits exist. Or saying, I'm going to spend X number of dollars on the cost side, and see where I can maximize my benefits.

And so a cost/benefit analysis is fundamentally a truncated -- I mean a cost effective analysis is fundamentally a truncated cost/benefit analysis in order to deal with the entire scope of issues.

COMMISSIONER PERNELL: Right. And which one of those would Edison prefer?

MR. ALVAREZ: We would prefer that you undertake the full cost/benefit analysis for DG.

So that you can look at the entire cost components that are involved there and the entire benefit components that are involved in DG.

MS. MARKS: Could I ask a question? Does that include avoided transmission?

MR. ALVAREZ: Well, if --

MS. MARKS: Transmission lines, like high voltage transmission lines. Would that be included in the analysis?

MR. ALVAREZ: Yeah, when Edison does its distribution planning or its transmission planning, to me that's a complicated question because you have institutional components that have to be addressed there. But I'll get to that in a little bit.

When we do our analysis in terms of what needs to be done, I mean we do include, as the entire scope, distributed generation options in terms of expanding transmission system with the distribution system.

Now, I want to address the institutional question that that bring up because the nature of the transmission system versus the distribution system is involved in part of this industry structure that we have in California over who's

responsible for what.

And the ISO currently has, you know, a transmission planning activity at their level that basically looks at the options for transmission expansion and options and alternatives for that. That gets involved in whether that's an ISO decision or the role of the state in that decision, and the role of the federal government in that decision.

So, it's a bit complicated in California. And I'm assuming, you know, other parts of the country, as well.

But clearly, if we were involved in doing the entire analysis, as a company, distributed generation would be part of that equation; we value what options are best to meet the state's needs.

MS. MARKS: So for example, like avoided costs of building a new transmission line would be included as one of the benefits then of distributed generation?

MR. ALVAREZ: Well, I'm not sure what you mean by avoided costs. You would look at what cost expenditures are you going to make, and what's the benefit of those expenditures being

done. And would it be better to do the transmission expansion, or would it be better to do the DG options.

You would compare those on some equal footing for some analysis undertaken. And, so --

The other item I want to bring up --

PRESIDING MEMBER LAURIE: I'm sorry, Commissioner Pernell, were you done with your questions?

COMMISSIONER PERNELL: Yes.

MR. ALVAREZ: The final point I want to bring to your attention is the 20 percent goal of incremental generation of DG.

We believe basically that that's premature. I don't think you've got the --

COMMISSIONER PERNELL: You believe what?

MR. ALVAREZ: Premature.

COMMISSIONER PERNELL: Premature.

MR. ALVAREZ: I don't believe that that information exists for you today to be able to reach that conclusion.

COMMISSIONER PERNELL: Do you know whether that's a federal goal?

MR. ALVAREZ: I'm aware that DOE has put out a proposal for 20 percent. I'm not aware that

they've identified incremental generation, so that's a distinction that I'll have to find out, but they've classified it.

COMMISSIONER PERNELL: You think it is premature?

MR. ALVAREZ: I'm sorry?

COMMISSIONER PERNELL: Do you think the federal goal of 20 percent is premature?

MR. ALVAREZ: Yes. And, finally, you know, basically we believe that the Commission should neither advocate nor promote DG. I mean it should use its analysis function and use its tools of analysis, and it should serve as the information source for policymaking and decisionmaking. That's its primary goal and that's its comparative strength in this activity.

And with that, I'll participate in the panel discussion and answer any questions.

PRESIDING MEMBER LAURIE: Do you think the state should advocate or promote enhancement to the grid system through adding new megawatts to the grid system?

MR. ALVAREZ: I don't believe the state actually, you know, it understands that it needs additional megawatts and capacity. And it's

determined that there's a need and there was a shortage, which is what we dealt with in the last couple of years.

And the advocacy of that is undertaken because of the problems that we've had. And I guess I wouldn't call it so much an advocacy, but a recognition that some additional supply needed to come into California. And finding that, in fact that the State of California found itself short, in quotations, last year and the year before last, you know, it was clear information that something was going on. And I believe what that something is is still under discussion and debate.

But I don't believe the state does advocate that. I think the state, you know, here at this Commission when it goes through a siting process, I mean scrutinizes the proposals, you know, far more detailed than any scrutiny that an DG development has received to date.

PRESIDING MEMBER LAURIE: Yeah, but you don't think this Commission does or ever should say we need more power? Don't you think that's a responsibility of this agency, if we believe that to be the case?

MR. ALVAREZ: Right. If you believe that to be the case, I would presume that that conclusion and that statement would be based on the analysis that you undertook. And so there would be an analytical foundation that would be built, that would be discussed. And then you would basically reach that conclusion.

PRESIDING MEMBER LAURIE: Okay, thank you. Commissioner Pernell, any more questions?

COMMISSIONER PERNELL: Not at this time.

PRESIDING MEMBER LAURIE: Thank you, Mr. Alvarez. Good job based upon what you had to work with.

(Laughter.)

PRESIDING MEMBER LAURIE: So, we appreciate that.

Dr. Keane. Good morning, sir.

DR. KEANE: Good morning. We appreciate the opportunity to come and verbally give you our comments. I have some PowerPoint slides that essentially summarize our written comments.

And in light of some of the remarks made earlier by Scott and the Commissioners, some of these points I think I can go through real quickly.

I have some general comments, kind of --

PRESIDING MEMBER LAURIE: Can lights come down just a little bit, Scott?

MR. TOMASHEFSKY: I can take it down a lot. Will that work? Can you still see, Dennis?

DR. KEANE: Yeah, that's fine.

I have some introductory general comments; and then I have some specific comments.

First off, PG&E believes the Commission has done an excellent job developing this draft plan. PG&E has long supported the right of customers to install generation on their side of the meter. More than 10 percent of the usage of customers that we serve is served already via onsite generation, so there's already a lot of it out there.

We've actively participated for the last few years in the CEC-led workshops to streamline interconnections. We've established, last year when there was a giant increase in the amount of DG that got installed, plus central station generation, we now have a department that's focused just on that.

We recognize the desire of the state to promote clean DG technologies. And we think the

draft report is consistent with all of these key values.

However, we do have a few comments, of course. And like I say, some of these have already been covered, and so I'll just briefly go through them. And then I'll cover some in more detail.

Earlier on, and this has been mentioned previously, is the definition of DG that's contained in the report early on includes DSM. And we don't think that's appropriate. The definition that Manuel said, of distributed energy resources, in my experience anyway, that's the commonly used definition that includes both DG and DSM, if you want to talk about both of them together.

We had a comment about some of the penetration figures. They seem high to us, but I believe that's because they include large-scale generation plants that may be serving customers, but are on the order of, say, like 50 megawatt size, that typically we don't think is considered in the DG definition.

And we think it's more appropriate to have a definition that defines DG as the typically

smaller plants that are connected at distribution voltages. But --

COMMISSIONER PERNELL: So you think it should be a kilowatt, a megawatt limit on the definition?

DR. KEANE: That's correct, yeah, and --

COMMISSIONER PERNELL: Do you have a proposal for what that is?

DR. KEANE: I think we have, in the past, proposed 10 megawatts. But no one seems to want to actually define it.

MR. TOMASHEFSKY: Dennis, you're making reference to the table that has the 2200 megawatts? I guess it's on page 9 of the report, the operational number.

DR. KEANE: Well, in our comments we cite page 3. Oh, no, that's the DSM comments, sorry. Pages, yeah, 2, 8 and 9 are the cites.

Now, you don't have to necessarily define it, but just clarify. I think it's useful to make a distinction, because when people talk about DG commonly they're generally referring to smaller customers installing it, you know, onsite and interconnecting at distribution voltages, not at transmission.

MS. MARKS: So it's that distinction of whether it's interconnected on the distribution system versus the transmission higher voltage? That's rather than a megawatt or kilowatt number?

DR. KEANE: Yeah, they're highly correlated, though. I mean typically the larger ones would be installed at the higher voltages.

MR. TOMASHEFSKY: Yeah, I think that number actually represents below 20 megawatts.

DR. KEANE: Okay. So this was kind of a minor comment. We thought it would be good to clarify.

The next point is --

PRESIDING MEMBER LAURIE: If you wanted to add a 5 megawatt, doesn't matter, 10 megawatt enhancement to one of your substations that serves a rather definable geographical area, are you currently permitted to do that under regulation?

DR. KEANE: Site DG at a substation?

PRESIDING MEMBER LAURIE: Yeah.

DR. KEANE: Yeah, I think we could do that. We've done pilot demonstration projects in the past, testing the concept of using a generator in an area where the demand just peaked for a relatively small number of hours per year. As an

alternative to putting in a bigger transformer, you could install a generator and run it for, let's say, a couple hundred hours just during the peak.

PRESIDING MEMBER LAURIE: One of my problems is, and I apologize for my ignorance on the question, I'm not extremely familiar with the regulatory basis that prohibits the utilities from doing DG. I don't know how that's defined.

So that if you wanted to enhance your system by putting in one megawatt, two megawatt, five, I don't have a good understanding of what you're allowed to do and what you're not allowed to do. And I don't want you to be in a position of you not being allowed to do something simply because it's called distributed generation.

DR. KEANE: Right. And we agree with that. At the PUC right now there's this ongoing proceeding where that was one of the issues, should the utilities be able to be allowed to own DG, themselves. And we, of course, argued we should. Why preclude an option, you know.

And a number of groups are opposed to it, although a number of even the DG vendors would like us to be able to own it, as well, because

it's another place for them to sell their product.

PRESIDING MEMBER LAURIE: One, if you were allowed to own it and if you were allowed to play, you would get on the other side of the table pretty quickly, I would imagine.

DR. KEANE: I don't think we're not -- we're on different sides necessarily.

PRESIDING MEMBER LAURIE: Okay.

DR. KEANE: We have some cost recovery concerns on some issues, but moving on. The second bullet on this slide is really our main point. And it's been covered already. I don't want to beat a dead horse.

But let me briefly point out, the last couple of years the State of California has provided very big dollars in terms of encouraging, providing incentives for DGs. There are direct rebate programs that the utilities have as a result of AB-970 that was passed a couple years ago.

The CEC, itself, has a rebate program. In the last legislative session there were waivers from standby charges that were put in as a so-called temporary measure, although in this year's legislative session there are new bills to expand

those.

Same with net metering; last year it was expanded from 10 kilowatts up to a megawatt. It was supposed to be temporary to the end of this year. There's another bill in the Legislature to extend that further into the future.

There are efforts by other types of technologies besides photovoltaic and wind to say, me, too, let us have net metering, as well. So there's been a lot of incentives for DG. But there really hasn't been an evaluation of whether what we did in the last two years is the appropriate level. Was it too much? Or maybe it was even too little. And we're just urging the Commission to do this study of the cost effectiveness.

Now, in the report it's listed as one of the first near-term goals. But the near term means three to five years. And we would just urge the Commission to really view this as the first order of business.

We think it makes way more sense to figure out, you know, is it cost effective. And I agree with Manuel that the cost effectiveness evaluation should include things like

environmental benefits, reliability benefits. Any kind of benefit that you think there is, let's throw it in and look at it.

Some of these are, as you said, hard to quantify. But they definitely should be considered. But we should do that first before we adopt a policy that, you know, a certain target is the right target. Or even that you should be encouraging more than we already have because maybe we have too much.

I think, you know, it's really kind of amazing to me that this amount of money has been spent on DG without such an evaluation. I realize last year it was a crisis mode and people were just trying to do anything they could to get generation online. But the situation's changed now.

And even the CEC, last year, at the Commission filed comments on the AB-970 rebate program that suggested that it doesn't look like these are really cost effective. So that's the kind of study I think that we need to sort of guide the policy.

That's kind of our main comment. And then I have a number of other comments. We don't

think there's really a need to look into the role that DG now plays in distribution planning.

PG&E believes that DG, in some situations, increases our distribution costs, depending on the circumstances. In some cases it can lower our costs and provide benefits. But these issues have been extensively debated in the PUC's DG-OIR proceeding, and we would ask you not to prejudge the outcome of that decision, since it's still pending there.

A number of parties have raised the issue that their renewable plants aren't able to find a market for the power. And PG&E, to the extent that's true, I'm not really sure if it's true or not, but to the extent it is, I think that would be a great role for the CEC to try to provide information and facilitate the sales of that power. It's really a shame that it would just be wasted.

We think the CEC should continue its excellent work in the interconnection workshops. We incur a lot of costs just by the fact that there are statewide inconsistencies. Our interconnection group deals with vendors that have projects in southern California and northern

California.

And to the extent utilities are interpreting things differently, I think it just raises the cost for everyone. It makes the interconnection process take longer than it really needs to take. And it creates a lot of controversy, maybe complaint cases at the Commission, things like that that could be avoided if there were more consistency.

And we agree that, you know, the public utilities ought to participate, as well. Now, it's not clear that all of them are, and we think a role of the CEC might be to support legislation to make those kind of standards applicable to both private and public utilities.

With regards to the setting up the database requirements, PG&E already provides information to the CEC on interconnections. To the extent there would be new requirements we have some concerns that maybe this could increase our costs and delay the interconnections. And there are also potential concerns about customer confidentiality.

The net metering issue, I think, has already been beaten to death. But it's really two

different definitions of net metering. It would be nice if the ISO called theirs something else. The ISO's issue is really has to do with installing two different meters. And it tends to do with merchant plants, whereas what we're mostly dealing with is the kind of net metering that involves smaller customers installing meters that can spin in both directions.

And then finally, we recommend deleting any references to particular goals, like DG penetration goals or other statements that seem to endorse DG, prior to doing this cost effectiveness evaluation.

Those are my comments. Do you have any questions?

PRESIDING MEMBER LAURIE: Commissioner Pernell, any questions?

COMMISSIONER PERNELL: Just on your last comment, and this is specifically to goals that are set and, you know, I think everybody in this room knows goals are just what's stated there, goals. But you have to have something to shoot for, so if you delete all of those what do we have?

DR. KEANE: Right. My concern would be

more that if you're talking about some goal for 2020, that's 18 years from now, I mean, who knows, by then central station plants might be incredibly efficient. And then it would make little sense --

COMMISSIONER PERNELL: The goals --

DR. KEANE: -- to put in DG when that's the case. Or maybe there's some new kind of DSM program that could solve the supply/demand imbalance at a way cheaper cost than DG.

So I don't think you really want to box yourself into that.

COMMISSIONER PERNELL: Well, actually I think goals are giving us more flexibility than a word that would say shall, for example, which is more of a legal term.

But I think we have flexibility with goals. My only point here is we've got to have something to shoot for, and as the markets and situations change, then the goals should change. So a goal is not a permanent thing, I guess is my point.

DR. KEANE: And I'm not against goals. I'm just saying 20 percent was kind of pulled out of thin air with no analysis. That's our point, I think.

COMMISSIONER PERNELL: Well, you know, if you can follow the lead of your federal agencies, I would assume that they didn't just pull it out of a hat. But, again, that's a goal and I don't want to, you know, I don't want to beat it to death, but my point here is that we got to have something to shoot for and goals gives us a certain amount of flexibility because they can be changed. But I think your point is well taken.

PRESIDING MEMBER LAURIE: Okay, thank you.

DR. KEANE: If I could comment on your question earlier about the transmission avoided costs. I think those should be included in a cost/benefit analysis. It's not clear that DG will always allow you to avoid transmission costs. I think that's more the issue.

But, if it does, it should certainly be counted as a benefit.

COMMISSIONER PERNELL: I have a question on that, if I may. Do you think transmission upgrades and expansion should be paid out of the PGC funds?

DR. KEANE: Public Goods Charge funds?

COMMISSIONER PERNELL: Yes.

DR. KEANE: No.

COMMISSIONER PERNELL: Does Edison have a comment on that?

DR. KEANE: I think they should be covered in transmission rates.

MR. ALVAREZ: I don't believe we would support transmission expansion the use of public goods charge, you know, there's places for a system charge and a rate recovery, be it ISO, be it FERC. But the public goods charge should not be used for transmission expansion.

DR. KEANE: One other comment on that. PG&E a couple, maybe three, years back did -- we had a transmission upgrade project in the kind of Livermore area where the ISO did have us solicit bids for alternatives to just upgrading the wires. It included distributed generation and load management type programs.

And I forget how many bids there were. I think three or four. And they weren't submitted to us. They were submitted to the ISO. And the ISO concluded that none of them were, in that situation, the lowest cost alternative.

But it has been something that's been done, at least in that one instance.

COMMISSIONER PERNELL: Okay.

MR. ALVAREZ: Commissioner.

PRESIDING MEMBER LAURIE: Sir.

MR. ALVAREZ: I'd like to comment on your question that you talked about the current regulatory standard for DG and utility participation. Because that was part of the PUC proceeding and when they conducted that proceeding and issued at least some of the decisions and some of the directives in which they submitted in that proceeding.

The current standard basically says that the utilities are not precluded from participating. So, your question about whether if we wanted to build a 5 megawatt facility, you know, in a substation, basically there's no prohibition against doing that.

We would have to file an application and get their approval, which is like any other investment that we would make, but the PUC currently has no prohibition against us.

In the discussion of the DG proceeding that's been going on, that issue has been raised under the question of utility ownership of those activities. And there has been voices and folks

who basically would like to change that standard and basically say utilities should not participate in distributed generation.

So that's kind of where we're at, and that's the current regulatory stance in the State of California today.

PRESIDING MEMBER LAURIE: Okay, thank you, Manuel.

Mr. Torres from FuelCell Energy. Good morning, sir. With these microphones you have to get really close to it, because they are poor.

MR. TORRES: We have kind of a double challenge today, the accent and the cold. So, you know, you're going to have to bear with me.

Good morning, Commissioners, Staff, members of the audience, on behalf of FuelCell Energy, first of all I'd like to thank you for the opportunity of having us come in and give comments on the DG plan this morning.

This morning I'm going to give you a perspective of a fuel cell manufacturer; a manufacturer of near zero emission technology that's seeking to aggressively commercialize this technology in the State of California. So you will find some bias in my comments, I am sure.

COMMISSIONER PERNELL: Are you representing those manufacturers?

MR. TORRES: No, I'm representing FuelCell Energy, one of the manufacturers, today.

As a preface I'm just going to tell you I've structured my comments around the table of contents of the draft plan, so if you didn't read the plan then I encourage you to sort of follow along with the copies. And I'm going to use a couple quotes to sort of make some of my points around this issue.

The vision, the mission, the principles of the draft plan. And I think my comments are that as opposed to four or five years ago there is now a choice around ultra clean technologies, a variety and different array of technologies that are either commercial or nearly commercially available to day. And that gives the state a number of options around what technologies to promote.

These are technologies that have proven to bring significant environmental benefits to the State of California, so we certainly think that those technologies should be encouraged to flourish in the state.

The issue that all new technologies will face is an issue of high initial cost and low volumes. And this has to do with just the nature of the research and development investment that's been done; the nature of slow production volumes that brings higher cost to each piece produced. And that's really kind of where the investment must be targeted going forward, is that none of us, as manufacturers, I think, have a vision of having subsidies, incentives govern our business model as an ongoing concern.

But we do feel that there is a place for incentives in helping us bridge the gap between the cost structure that we're seeking going forward, so we can be ongoing concerns, and the cost structure we face today.

One of the key challenges that we'd like to ask the Commission to explore is being able to monetize, to quantify some of the environmental benefits that newer emission technologies bring to the State of California. Today there clearly is not a process to do that, but we think that that is part of some of the benefits that technologies like fuel cell technologies will bring to the marketplace.

In the area of deployment issues and opportunities, I'm going to touch on two, and then I just added one because incentives were talked about enough that I felt that I needed to make some comments on that, as well.

Let me start with the connection issues, and let me first really congratulate and comment on the efforts that the Energy Commission through Scott and his group have done around rule 21. As an industry and as a manufacturer, we feel that the technical requirements, the technical issues that are currently being faced will get resolved, you know. There's technologies, there's solid state, there's software that will get to meet the interconnection requirements, the concern the utility companies and operators of distribution systems have.

Unfortunately, as you well know, the rulebook has not been written, has not been finished. So we, as manufacturers, are going through the process of trying to make equipment, design decisions based on a rulebook that continues to change.

However, we think that the rule 21 efforts, the 1547 efforts, 1741, all those

standards will converge into what we hope to be a nationwide sort of standards that we can design around, and therefore meet the concerns, the valid concerns, I must say, that, you know, distribution system operators have in terms of connection.

I think that the real issue around interconnection is really standardization. If you look at a business model today that we have as DG manufacturers in which we can't tell an end user what the amount of the installation is going to be, and what the timing of the installation is going to be, you will quickly come to the conclusion that's a really tough position to be in the marketplace, where you can't tell your end user how much it's going to cost you to interconnect and how long it's going to take to interconnect.

So, any efforts that are being pushed forward around standardizing interconnection, we think, are surely going to help propel this market in a broader scale.

In terms of market integration and regulatory issues, we think that there's a number of other benefits that must be considered around this area in terms of the state. The state must

value the resource diversity, the independence, the security and other benefits that ultra clean brings to the marketplace.

Again, I talked about incentives as not being the answer, or the business model for industry, but rather being a bridge that allows to get to a cost competitive position where we can actually function as an ongoing concern.

And we also believe that the utility industry should not be negatively impacted around issues of DG. And we share that comment, I think other manufacturers have the same comments. They should be able to participate on the DG deployment and we think that, you know, if we can frame that in a regulatory environment, that would lead to a cooperative, you know, participation interaction with utilities, versus very much sort of a divisive approach as you've seen today, this morning, where we all take our sides.

Where, you know, if we were working under a common set of regulatory objectives where the utilities were compensated in some way for the growth, incentivized, they might take a very different approach to how this all gets done.

I am going to comment around incentive

programs being too much, being excessive, being overfunded. We would like to argue, but that's not the case. If you look at -- program from the CPUC, which is the largest program, the bulk of the money that's out there in the state today, it only funds about 60 megawatts of new DG across all technologies each year.

You divide up that by the different technologies, by the different manufacturers and not a single manufacturer would be able to capture more than 6 to 8 megawatts of new demand over the next, you know, three years. Last year and the next two years.

We will say that the amount of the incentives, themselves, doesn't appear to be excessive, at least in the fuel cell marketplace, even the fact that the program is underfunded, which leads you to believe that there's, you know, there's not necessarily a market today, even with that incentive. So we're not overfunded that specific technology.

So I think there is some evidence to show that the incentive program we have today is not excessive. I'm not sure whether I can tell you it's not enough, you know, but I think that

would be a biased comment that I would make and would be way too transparent for me to do that today.

In terms of strategy, options, goals and objectives, the report states pretty clearly that the Commission have focus primarily on R&D issues and funding R&D activities as it relates to DG in the past. And we would suggest the Commission shifts its effort around emphasizing the deployment of DG rather than, you know, R&D around DG.

I think DG has been analyzed extensively over the last five years or so. I think that there's some further analyses that has to take place around the externalities, this benefits externalities that they have not been quantified, have not been monetized yet.

But basically at this point in time if you cannot take a look at the marketplace there are a number of technologies. There's a portfolio of technologies out there that have been funded through DOE. That have been funded through PIER. That have been funded through equity markets.

And the key challenge that's faced by those technologies today is deployment.

Deployment is really the challenge; deployment is what's going to make or break the industry, I would say, over the next three or four years. So a deployment strategy delayed five years will not result in a healthy DG industry going forward.

I'd like to comment on the interim goals, the near-term goals that were outlined in the report, and I'll just pick on the ones we felt were important.

Institutional regulatory issues. Again, we ask the Commission to help us in trying to reconcile the need that all the agencies have outlined around incentivizing new ultra clean technologies to build the bridge between their cost structure today and the cost structure in the future, with some disincentives such as exit fees are currently being proposed or being debated. We think that those positions are inconsistent.

We need a window of opportunity to get to be cost competitive. We don't expect to be, for that window to last forever. But we do need a window for us to achieve cost competitiveness.

In terms of minimizing the conflicts with the utilities and DGs, I think we also agree and support utilities participating in ownership

of DG, specific as it refers to substation infrastructure support. That market will be closed in California until the public utilities are allowed to look at DG as a potential option, own and operate DG as they need to do.

And number seven, in terms of the coordination, it's clear to everyone, I think by now, that there's a lot of good efforts being undertaken by a lot of agencies and a lot of institutions in the state, but clearly, one of the agencies has to emerge as a focal point, you know, has to take leadership around these issues and hopefully frame them in such a way that the efforts are all going the one direction. And then hopefully those efforts actually end being efforts that allow the DG industry to develop the way we all want it to develop.

MS. TOWNSEND-SMITH: Can I ask you a quick question?

MR. TORRES: Yes.

MS. TOWNSEND-SMITH: On that point.

MR. TORRES: Sure.

MS. TOWNSEND-SMITH: Both Edison and PG&E both said that they don't believe that the role of the state government is to promote

distributed generation. Do the manufacturers have a position in terms of what they feel that state government's role should be in DG?

MR. TORRES: Absolutely. I'll speak on behalf of fuel cell energy. We feel that the state does have a role, a public interest role, in promoting the development of near zero emission technologies such as fuel cell energy.

We think there's a number of public benefits that can be associated with the deployment of these technologies. And I'll speak a little bit later around the economic development benefits potential the state could capitalize on if this industry were to flourish over the next five to ten years.

MS. TOWNSEND-SMITH: Thank you.

MR. TORRES: So, at this point in time, you know, again in terms of the role of the state, we think it has to be an active role. We think, you know, it needs to lead -- of trying to put this industry, you know, go forward in this industry in the next five years.

You've noticed that number nine doesn't show on your near-term goals; it's actually your first goal in the mid-term goals. And, again, I'm

going to go back to my premise to emphasize the need for investing for working on deployment in the next five years as being one of the key challenges that the industry phase, thus one of the key challenges that we think the Commission should embark on in terms of helping promote and facilitating.

So, we like the objective. We just think that the timing of the objective is such that five years from now is too late. If you look at the way this industry is being funded, there's a lot of investment that has been done over the last five years in the industry. And the private sector will not be patient enough to wait ten years from now for the industry to develop. The private sector is looking for a broad development of the industry within the next five years.

Lastly, I am going to go back to the 20 percent penetration goal. I think it's an objective worth keeping. We think it's consistent with the DOE and what the DOE has done around looking at the potential of DG and establishing an objective for all of us to shoot for. So we actually support the objectives staying in the report.

Lastly, I was also asked to comment on the economic development potential impact of the DG technologies in California. And I must say that we do have sort of a window of opportunity here in California because the state is already well positioned around leading the DG industry in the U.S.

If you look at the percentage of PV manufacturers that we have, you know, headquarters in the state. If you see, you know, the leading microturbine manufacturing being headquarters in the state. I think there is a good base from which the state, again if possibly and proactively encouraging the industry growth, to capitalize on California being potentially the capital of DG in the U.S., DG development in the U.S. and if not the world.

And there's a potential of attracting significant additional investment, you know, from DG manufacturers. My company, FuelCell Energy, through the California Power Authority bid process committed to, you know, investing over $100 million and creating over 100 jobs to fulfill the volume commitments that the CPA was seeking to purchase back in February when the RFP was

processed.

But, the key decision-making criteria that we'll utilize as an industry in terms of making investments in California will be a clear path to a significant, you know, volume of sales; a significant market in California that will actually, you know, work itself out.

So I think demand aggregation to the agencies will be a great first step in trying to, you know, if you would, push that process forward. And we think we also have a great opportunity to support exports to the Far East from California, as California being a gateway to the Far East in terms of trying to address their demands, as well.

So that concludes my comments. And again I thank you for your time and listening to us.

PRESIDING MEMBER LAURIE: Thank you, Stephen, very much. Commissioner Pernell, any questions of Mr. Torres?

COMMISSIONER PERNELL: Yeah, I have just a couple questions. Your presentation centered a lot around incentives for the development of DG, and I'm assuming with emphasis on fuel cells.

My question is from a manufacturing

standpoint where do you see there incentives going? To the manufacturer, to the utility, to the customer?

MR. TORRES: We think the structure in which customers or energy service providers who are doing projects for customers are able to mitigate the initial high cost of these technologies in order to make these technologies cost effective as it relates to other electric prices are where the incentives should be placed at.

So we think that the way the incentives are being placed today, for example, in the CEC programs, as well as the self-gen program are probably the right place.

COMMISSIONER PERNELL: And you also talked about deployment of the technology, what I would term as market transformation, I guess. Do you see that being a role of state government, to go out and advertise for a manufacturer?

MR. TORRES: No, we --

COMMISSIONER PERNELL: Or is that a role for the manufacturer who's trying to sell the equipment? I think where I'm a little hesitant is whether or not we, from a public policy

perspective, should be out advocating a private company's product.

MR. TORRES: No, and that's not the point I was -- when I talked about deployment, our point that the state should facilitate the deployment of technologies, the broad deployment. And that's doing the work that you've done on the interconnection; that helps that by supporting an incentive program to end users in a technology neutral, well, I would say ultra clean technologies, but in terms of that neutrality within that band, those are all the efforts that we see as your deployments.

We don't see you -- stations, you know, pushing out technologies. Is more around the broad support that will lead to this deployment, rather than further analysis on the minute details of what are the benefits and costs. I think we'll learn a lot of that by doing broader deployment.

COMMISSIONER PERNELL: All right Thank you for that clarification.

The final question is do you have a -- do fuel cells -- well, scratch that. Is there a fuel cell manufacturing facility in California?

MR. TORRES: I believe there's a small

company that manufacturers a small fuel cell that's in California. Most of the commercial stationary fuel cell manufacturers are outside of California today.

But, again, at least one of those manufacturers, ourselves, see a tremendous potential of adding manufacturing capacity outside of our headquarters to match a market that will grow over time. And California could be that market if it's structured right.

COMMISSIONER PERNELL: And the reason I ask that question is you talked about the economic benefits and et cetera, so I was curious to see whether or not California actually had a facility here.

MR. TORRES: No, you seem to be better at PV and in microturbines, they have a better --

PRESIDING MEMBER LAURIE: Thank you, Mr. Torres, very much.

Mr. Kammerer from San Diego Regional Energy Office. Good morning, Kurt.

MR. KAMMERER: Good morning, Commissioner Laurie, Commissioner Pernell, ladies and gentlemen.

The San Diego Regional Energy Office

fully supports the Commission's efforts and appreciates the opportunity to be here today.

As many of you are aware the Regional Energy Office has joined the County, the City, the Water Authority, many agencies in San Diego to embark on a somewhat of an unprecedented 30-year energy infrastructure study, which, when we announced that and conducted a series of 25 to 30 interviews with major constituencies, there was a pretty noticeable breath of relief in that most said, wow, it's about time we started looking beyond the three- to five-year timeframe. Particularly since most of the power plants we see getting put in place are natural gas powered and will have a life of 25 to 50 years.

So we had a lot of support for this infrastructure study. We are five months into this study. And one of the emphasis of the study is the impact of distributed generation.

In San Diego we have about 500 DG sites, depending on how you define these. About 300 megawatts. About 8 percent of our current load.

Our projections for 2030 are approximately 4 gigawatts of additional load. Depending on our growth scenario, which is, of

course, the equivalent of eight power plants.

We do not see that those power plants, or half of those power plants would be built in San Diego. We're having trouble getting the one approved power plant built in San Diego by Calpine. There's significant question whether the New Valley Rainbow Transmission Line will eventually get built.

We already have serious congestion into San Diego. So we have not necessarily adopted this as a community strategy, but clearly see, in the long term, distributed generation will be a part of our energy mix in the future.

And in fact, think -- I'll talk a little bit more about this -- think the 20 percent incremental load in the long term is probably a conservative estimate. And I'm not going to say a goal, because it's not been addressed as a goal. But we believe if we don't see 20 percent or more we will not meet the needs of the growth in San Diego.

As part of this study we looked at forward prices of energy and capacity, particularly in light of the congestion in San Diego. And see those prices to remain to be very

high in the future. You know, unless there's some major policy shifts with regard to building larger nuclear plants or coal-based plants, we're concerned about the long-term prognosis for natural gas, particularly since there's discussion of building several LNG plants south of the border. That would, you know, peg natural gas at prices that we believe would make alternatives, particularly renewable distributed generations, very attractive in the 2010 to 2015 timeframe.

My computer's going to run out of battery. That's okay. We stand ready to support many of the actions. If there was one critical comment I would say we're not moving fast enough.

One panelist said there's a window of opportunity, I believe this is true. And we need to -- we're trying to focus, not only the perspective of the grid, but also the perspective of the consumer.

The cost/benefit analysis of distributed generation has been done a number of times. I think the analysis of the grid impacts have been done a number of times throughout the past two decades. We've seen those results. We know that there's significant benefits.

I think we're in a bit of a denial saying that a) that they're not going to be needed in the next 30 years; and b) saying that the cost/benefit analyses have not been done. I think one of the things we're trying to do is take into consideration all costs, particularly from the grid side. And we don't think it's even in question of whether it's beneficial for the consumer.

And we're starting to do more rigorous analysis of the data now that we're administering the self-gen program in San Diego. We had very hard numbers for projections. We understand this might be a median to high case since the incentives are so high. But, again, based on our price forecast at least the cost avoidance for the customers' perspective we think will be there for the next, at least the next five to eight years. And about that time the upward pressure will be driven by other issues, restrictions on natural gas, you know, continued inability to build power plants and transmission lines.

So, you know, our prognosis on the long-term price of electricity and natural gas is probably not as optimistic as others.

So, just looking at our rough numbers that we projected and what we've looked at is the basecase of what exists in San Diego. And took what is going in place now incentivized by the self gen and the CEC program is somewhat of a high case. Prices are high; a lot of incentives.

And we're seeing, you know, anywhere from a 6 to 11 percent total capacity out in -- I'm sorry, per year -- I'm sorry, in 2030 about anywhere from a 7 to 13 percent of our total peak demand being met by distributed resources. And, you know, anywhere between 12 and --

COMMISSIONER PERNELL: Is that in some study -- I'm sorry -- is that in some study somewhere?

MR. KAMMERER: Well, this, what I'm doing is mentioning some of our preliminary analysis from our infrastructure study. And, again, these are preliminary numbers. One of our challenges is finding good data on existing sites, because it's not in one place.

The CEC has good data on certain size plants. We've talked to the Air Pollution Control District. And we're making certain assumptions that, you know, it's been clear this morning that

everyone's not on the same page with respect to what we're looking at.

But we're looking at all types of distributed generation in this case, with the exception of emergency generators. But, again, we took today's deployment rate as somewhat of a high case, medium to high case, and we do think the goals are achievable. And as I said, if we don't make those goals now, we're going to have serious problems in the medium to long term with respect to meeting our resource needs.

There are a number of things that we're doing as part of the self gen program and analyzing the market and moving self generation today that I think can be extremely helpful to the Commission in achieving some of its goals.

Like goal number one, creating a central repository for information. We'll be doing that and have been doing that as part of our self gen program and the standing up of our new energy resource center in San Diego, which was recently funded by the --

MS. TOWNSEND-SMITH: Is that just for San Diego, or is that for the state?

MR. KAMMERER: -- PUC. Well, our

position is anything we develop is public good, it's funded by public good --

MS. TOWNSEND-SMITH: No, the information. Is it regional, or is it statewide?

MR. KAMMERER: Some will be regional; some will be applicable to the entire state. But our focus is San Diego.

But our position is anything we develop will be web-based access and available to the state. The Energy Resource Center will be largely virtual. Most of the information will be available online.

So, part of that we will fund through the self gen program, somewhat of a repository. We'd like to understand what you have in mind, but again, I see that being needed today. And like to see that up and running by the end of this year, rather than three to five years out. So, I kind of define our near term what do we do in the next 12 to 18 months.

Determining regional impacts, there again we're done some preliminary analysis. We're getting good cooperation from SDG&E, the local utility. But we know they know their hot spots. We know we're putting distributed generation on

those circuits.

I think it's just a matter of all parties getting together and agreeing to do some impact analysis. And I think that can be done in short order, at least in, you know, 12 to 24 months.

Raising the awareness, we're working on that very hard today. I don't think that should be three to five years out. I think it should be now. Because there's a lot of momentum and a lot of misinformation that needs to be overcome. And we need to make sure that when we're raising awareness, we're not just -- there's two perspectives here. It's the consumers' perspective that is paying rates that are, you know, 50 to 60 percent higher. And even the least cost effective distributed generation technology, you know, we're finding to be very cost effective. That being PV.

We're seeing a tremendous deployment of PV. Four builders are deploying PV in solar thermal on homes. Three of them as standard options in San Diego. We're seeing about 2 megawatts of large systems go in by the end of this year. And we expect four to five by 2005.

So, we think that the consumer is making this cost/benefit analysis, and you know, that's behind us. So let's move on.

We think we can do much more with respect to the market potential if we had better information with respect to the segmentation of customers, load profiles. But, again, that information is difficult to get because it's, you know, highly protected by the utilities.

We're getting better information about the actual barriers in the field. I was taken in a cab from the airport with one of the developers, themselves, and surprised to find that the challenges aren't necessarily certifying and permitting the generators, themselves, but maybe putting up a structure around it. Could take 60 days, which, you know, sometimes we're not necessarily looking in the right places, I think.

So we're prepared with our work with local governments to maybe address that issue again in the next six to 18 months.

COMMISSIONER PERNELL: When you say putting up a structure around it, is that a -- what are you referring to?

MR. KAMMERER: An environmental

structure just to protect the system. Or --

MS. MARKS: Noise control.

MR. KAMMERER: -- a shack, a building. So at least in this particular case, installing a microturbine, say at a hotel, was not a difficult thing to permit. But the shack, itself, took 60 days. And that actually drove the -- now, that's not an energy issue. But that, you know, if we get all parties at the table, identify that that might be something that we could work through.

I'm not certain the barriers, with respect to permitting, are as high as we think they are, particularly now. And now would be the time to address that. I'm afraid in two or three years if we don't seize this window of opportunity, a) that we'll figure it out the hard way how to overcome those barriers, or b) we would have prohibited a lot of systems to go in because those barriers could not be overcome.

Customers are impatient. They want these systems and they want them now. And there are barriers, and we know what they are better today than we did a year ago, certainly.

I'll wrap up my comments. Again, in summary, we support the Commission's efforts here.

We stand ready to work with you in a very proactive manner, to address the goals that I outlined today. We're fully supportive. Maybe it shouldn't be a goal, maybe it wouldn't be so threatening. But I think if we sit down and do some long range integrated resource planning and start to ask some of the tough questions, where is California going to -- how is it going to double its capacity in the next 30 years.

It's clear to us, at least, that it's going to have to come from a much broader diverse fuel supply, and a broader range of technologies.

That concludes my comments and I'd be happy to answer any questions.

PRESIDING MEMBER LAURIE: Thank you, Kurt, good report. Appreciate it. Commissioner Pernell, did you have any questions of Mr. Kammerer at this point?

COMMISSIONER PERNELL: Just one, and that's the follow up on the barriers. Is that more related to visual and sound, or safety?

MR. KAMMERER: You know, this was a very short conversation so I'm not sure --

COMMISSIONER PERNELL: September 11th --

MR. KAMMERER: -- I'm not sure what the holdup was. We have, I did talk to some folks about, there was one microturbine going in very close to a residential area. And I asked them specifically about noise, was that an issue. And this was another conversation.

And it wasn't, you know, sound attenuation can take care of that issue because I don't think that's necessarily a barrier. As I said, that was a bit of anecdotal evidence. I guess the point I was trying to make is, you know, we have 18 jurisdictions in San Diego. Probably half of those are seeing generation permits come through there, as we speak. So now would be the time to get them together with the vendors siting those, and to really try and troubleshoot those issues today, not in three years.

PRESIDING MEMBER LAURIE: You know, I don't know how you address the issue generically. Most local jurisdictions, for example, industrial or commercial use, if the use is already allowed by zoning, and then you are adding to that, some kind of self generation system, the local laws basically and generally say if the impact of what you're doing extends across the property line then

you need a special use permit.

And you cannot generically address special use permits because you have to deal with them on a case-by-case environmental basis. So that is a real challenge unless you had some kind of exemption in CEQA for a generation system that merely supplements some other land use.

And we haven't done that. And this issue of self generation attached to and becoming a part of a commercial or industrial use is going to be a big question in the years to come.

And our regs and our rules are kind of amorphous and ambiguous on the question. It's something that's going to have to be addressed.

COMMISSIONER PERNELL: Just one final question. You mentioned in your presentation about some approximately 500 DG sites in the San Diego area?

MR. KAMMERER: I'm sorry, the question again?

COMMISSIONER PERNELL: You mentioned in your presentation about the number of distributed generation sites you have in your area?

MR. KAMMERER: Correct. Again, depending on where you draw the line, whether you

include, you know, residential distributed generation. I think traditional commercial, industrial sites are about 100.

But if you start to include, you know, all peakers, all residential systems, it's closer to 500.

COMMISSIONER PERNELL: My question, though, is just what type of technology would you say make up the most of those sites?

MR. KAMMERER: Most of what we're seeing going in new is residential PV and reciprocating engines, some microturbines. Existing plants, I think, are mostly large cogen, 10 to 25 megawatts in hospitals. Again, we're excluding backup generation in this case.

And there was quite a bit of reciprocating engines on landfill, about 10 megawatts on landfill. Some hydro and pump power. There's renewed interest. The water authority's evaluating a, you know, peak shaving pump power on a new dam project. And they could possibly upsize this plant from about, I think it's about 12 to 40 megawatts, or even up to 90 megawatts.

So they're really interested in, you know, what are the potential benefits of peak

shaving in the future.

I hope I answered your question without --

COMMISSIONER PERNELL: It does. I would just say that San Diego is very progressive in this area, although they were somewhat forced to be early on in our energy situation.

MR. KAMMERER: Yeah, I'm not necessarily speaking for all parties in San Diego here, it's --

COMMISSIONER PERNELL: I understand.

PRESIDING MEMBER LAURIE: Thank you, Kurt, very much. Appreciate it.

Jeff Byron, Silicon Valley Manufacturing Group. Good morning, Jeff.

MR. BYRON: Good morning, Commissioners Pernell and Laurie.

COMMISSIONER PERNELL: Good morning.

MR. BYRON: Thank you very much for inviting me to provide comment.

PRESIDING MEMBER LAURIE: Good conference the other day, by the way.

MR. BYRON: Thank you. Thank you for coming. And thank you for staying.

PRESIDING MEMBER LAURIE: Well, I was

last on the agenda, I had to.

(Laughter.)

MR. BYRON: Today I'm here representing the Silicon Valley Manufacturing Group. I co-chair a subcommittee that we have on distributed energy resources. I was also here in February when you had your workshop around the outline of this.

I'd just like to take five or ten minutes -- I know I need to make a break -- to provide some comment and input to the Commission.

First I'd like to address the need for this distributed generation strategy once and for all. And that is why do we need the strategy. If you'll just hold there for a second, Scott.

Okay, although power from the grid's traditionally been easy, cheap, plentiful, reliable, as customers we're now faced with some uncertainty around these characteristics. Maybe not the easy part.

I'm here to tell you that distributed generation ain't easy. And the strategy document that you created, I think, goes a long way to helping customers address that particular issue. It's very difficult to do onsite generation.

Having said that, I'd like to thank the Commission and staff for the foresight and the perseverance around distributed generation. It's an important option for end use customers.

I'd like to also thank Scott Tomashefsky and Mignon Marks for their efforts in preparing this document. I find that the plan is thorough and complete. You dealt with all of our comments very even-handedly. The strategy options and goals are very consistent with the needs of SVMG member companies. And I think that if this is successfully enacted the plan will go a long way to enabling the widespread adoption of distributed generation.

In fact, I'm a little bit surprised by some of our comments from the panel this morning around this document, it's a policy document. I think it's a well written strategy. And we endorse it wholly in that capacity.

However, I do have some recommendations around its implementation. So I'd like to go a step further and hopefully this will be helpful to you. There will be six bullets here. They all start with C, I just noticed, so it's the six C's. It's alliteration to help make it easier for your

staff.

(Laughter.)

MR. BYRON: The first one is interconnection. It's being addressed by the Commission in a substantial way with its efforts around rule 21. And we applaud the leadership of the Commission and staff and the time that they can devote to this.

But the utilities still control the process. I think the comments of some of the panelists from the IOUs here provide some indication of what that's like. They have the interpretation of rule 21; they determine the scope of issues that customers must address around interconnection; cost and scheduling.

So, please monitor this implementation of rule 21 and consider the benefits to customers; there may be a third-party review of some kind that would help through some of these high-cost interconnection issues.

A second one there is the CEC is really not the problem here. I'm just an uninformed speaker this morning, Commissioner Laurie, but anytime you want to have breakfast with one of our CPUC Commissioners we'd be more than happy to pay

for it, as we did on Friday when you were kind --

PRESIDING MEMBER LAURIE: Now, who are they?

MR. BYRON: -- enough to join us.

The third one is please be careful not to mix policies. And the interpretation of those policies. I was trying to think of some quick examples this morning as I was sitting here. Obviously a renewable mandate or the definition of distributed generation around size or what its composition is. These kinds of things could have an adverse impact or some unintended consequences that should be considered up front.

Item four would be calculate the economic impact of policy. I think you've heard others state that here this morning. I'm thinking more in terms of the mandates that are imposed upon the customers and the utilities. That's really where the economic analysis is beneficial, before you adopt such policies.

And the fifth one there, you know, please forgive my arrogance, but I believe the objective of all this process is to help California businesses be more competitive. And therefore you need to pay attention to what the

needs of the end use customers are.

And the last one I think I have up there is around your recommendation, Scott, in the report. I think it's recommendation seven, the DG state agency coordination group. I'd really recommend that you include consumer input to that particular coordinating committee.

That may be an important role, that group, given the lack of coordination that seems to exist, again just from an outsider's perspective, around all of our state agencies. That group may be very beneficial to distributed generation going forward.

My last slide, I would just like to take a moment to perhaps help with regard to some of the barriers that you're trying to characterize. I think it was in your goal seven. So I'll be a little controversial here.

I've been working on distributed generation in one way or another for a long time, having been at the Electric Power Research Institute; I founded a company to build distributed generation; I was the Energy Director at Oracle Corporation; worked for Calpine's critical power division for building onsite

generation for customers. And now I find myself consulting to those end use customers.

I'd like to make it clear that there's a lot of reasons why distributed generation could fail in California. The first one, as I indicated, is it isn't easy. We often discuss distributed generation like it's plug-in play. There's a lot of moving parts.

The second is that the policies in our state government right now don't seem to consider the customers' needs first. And the third is the utilities control the interconnection process, as I mentioned earlier.

Four, right now it seems to be a tariff game. And there's a great deal of uncertainty around that, subject to change.

Five, and this is important, right now there doesn't seem to be anything in it for the utilities. They need to see some economic benefit. I'm reminded that customer choice, in a sense, spells the end of a regulated monopoly. And so they're somewhat concerned about this.

My sixth bullet there, the state mandates oftentimes creates stranded costs. And this gets back to policy. We've seen this many

times. The most recent example of this, of course, are our long-term contracts for energy purchase, and the impact that those are now going to have on all consumers in the state. And we're concerned about what might be next.

Seventh, CNI customers have an easier option. And I'm here to remind you that that option is not a club, but it's happening. And that is they can always leave the state. And we're seeing some of that.

And number eight. It's somewhat of an ironic statement, but I'd like to close with that. Please consider the irony of the fact that if distributed generation fails in this state, it in all likelihood won't be for technological reasons.

Thank you very much.

PRESIDING MEMBER LAURIE: Thank you, Jeff. Commissioner Pernell, any questions of Mr. Byron?

COMMISSIONER PERNELL: You started out with the premise that distributed gen won't make it in this state. And you listed reasons. And they're all good reasons, but, you know, I would want to start with the premise that it will and these are the reasons why, because we're going to

address those in some either form, either the CEC or the PUC or whomever. Probably stakeholders, I think those are the ones that are most affected.

The other thing that I would certainly agree with is that we have to consider the end user in all of this. And so I'm appreciative of that. One of my questions, though, deals with the barriers that you see. And you mentioned interconnection. Do you see one of those are a barrier, or just strictly state policy as being barriers?

MR. BYRON: Interconnection, as a technical issue, should not be a barrier. And I think rule 21, as I understand it, the rule 21 coordination group or whatever, its working group, is working to address most all of those technical issues.

But interconnection, once the customer is left to deal with their local utility, it's a great opportunity. And there's many anecdotal stories around this. It's a great opportunity for the utility to impose requirements that may go beyond what's necessary. There's no recourse for the scope of upgrades that might be necessary on the part of the customer, additional protective

relaying, et cetera.

There's no recourse for the customer on what the cost of that might be. There's no recourse for the customer on when the schedule of that might -- when the interconnection process, how long it might take and when it might happen.

So, I'd like to suggest that perhaps a third-party review of some kind. There are plenty of experts in this state that exist outside the utility, who could provide, I think, a very good independent, third-party review.

Look out for the safety of the utilities' interests, the safety of its workers; address the impact on the grid; and still provide some cost control over this process.

I'm sorry if that doesn't answer all your questions.

COMMISSIONER PERNELL: Well, no, actually it gets to one of the points that came up earlier, which was a state -- well, a collaborative effort from a number of parties to have a coordinating council to address this issue. Is that something that you would be supportive of?

MR. BYRON: Yes, sir, I'm not --

COMMISSIONER PERNELL: Which would

certainly be a third-party group.

MR. BYRON: Yes, sir. I'm not proposing another large organization. I think this can be a fairly small group of highly qualified technical individuals who can make good evaluations on behalf of the interests of the state.

COMMISSIONER PERNELL: Thank you.

PRESIDING MEMBER LAURIE: Thank you, Jeff. Do any of the -- can we have our lights back, please -- do any of our panel members have any closing comments before we hear from the members of the audience?

If not, let me thank the panel members very much for your participation. We're going to give Mr. Byron his 11-minute break. We'll see you back here at 11:20, and we really want to hear from -- there's a number of folks here who are not only interested, but have a great deal of expertise. We need to hear from you.

See you in ten minutes. Thank you.

(Brief recess.)

PRESIDING MEMBER LAURIE: Public comment. We need your input. We don't have any kind of blue cards to fill out, so let's take whoever is standing up first. So, don't worry

about any particular order. Maybe what we can do is we'll go section by section, so we'll deal with the section on our right first. And then we'll go to the section on the left.

Good morning.

MS. BLUNDEN: Good morning. I noted that on the agenda exit fee discussion was supposed to follow, but --

PRESIDING MEMBER LAURIE: Correct.

MS. BLUNDEN: -- it was also identified at about 11:30. I'm wondering if it would be okay for me to talk about exit fees?

PRESIDING MEMBER LAURIE: You have a time constraint?

MS. BLUNDEN: I do.

PRESIDING MEMBER LAURIE: That's fine. Everybody who's going to comment, we need to get your name and affiliation, if any, on the record. And we need to have you speak close into the microphone so we can get it properly recorded.

And is this on the net?

MR. TOMASHEFSKY: It is. They usually can hear better than we can in this room, so that's probably a good --

PRESIDING MEMBER LAURIE: And is tied

into CNN, so you are being heard today.

(Laughter.)

PRESIDING MEMBER LAURIE: Good morning.

MS. BLUNDEN: Good morning, Commissioner Pernell and Laurie, thank you very much for the opportunity to address you. My name is Julie Blunden. I'm with Xenergy Corporation. And we're going to be supporting the Commission assuming a positive vote next week on the renewable energy program as your prime contractor for the technical support contract to the renewable energy program.

We also do quite a bit of work on distributed generation nationally. And I wanted to take the time to just address the specific California issues related to exit fees and distributed generation.

In my past life I was the Regional President for greenmountain energy in California, and therefore I'm pretty familiar with the direct access issues that drove the conflict between the DWR contracts and the direct access customers.

PRESIDING MEMBER LAURIE: Let me interrupt. Can we hear her okay? No. It's not your fault, it's our microphone problem. So you do have to get close.

MS. BLUNDEN: Let me check and see if that's better for you?

PRESIDING MEMBER LAURIE: Yes, it is, thank you.

MS. BLUNDEN: Very well. I want to address the specific issues around the DWR contracts and the impact on exit fees for distributed generation.

As you know, distributed generation, according to your strategic plan, represents about 2000 megawatts in California, which is a small percentage of the overall state's both generating capacity as well as the import that we use from an energy perspective.

And the majority of that is photovoltaic, meaning that it's peak load reducing in nature.

Given the fact that the DWR contracts are in conflict on a short-term basis, having bought power at times where we're going to have to sell some of that power to the spot market, the timeframe with that conflict is really just a few years forward. And from say 2005 or so beyond, we will no longer be in a situation where we would have to address exit fees should that issue have

come up in the future, rather than in the 2001 timeframe.

So, the interesting thing about DG is DG today is not a severe threat or a conflict with the DWR contracts. We have 2000 megawatts currently. We're looking at putting on another couple hundred megawatts. It's nothing approaching the direct access issue, which is about 14 percent of load, because of the rush to sign up for direct access contracts last summer when wholesale prices started to drop.

So, if you look at what really the problem is with the DWR contracts, it's not distributed generation. And, in fact, if we were to be so short-sighted as to put exit fees on distributed generation that would be long term in nature, that is the potential to shoot us in the foot when it comes to the 2005, 2006, 2007 timeframe when DWR contracts are no longer an issue.

And in fact, as distributed generation ramps up in its productivity, it has the potential to really improve peak load reduction and providing overall benefit to the state and all ratepayers in reducing peak rates.

So to summarize, the DWR contracts are a short-term problem, and distributed generation is not in direct conflict with DWR contracts in the next few years in any significant amount. And, in fact, in the longer term when DWR contracts are no longer an issue, distributed generation could be a major supporting element to the overall strategy of serving California's needs.

So it would be shortsighted and a real problem, I think, to apply exit fees to distributed generation when they're not really a problem.

Certainly the direct access community has ceded that there's going to be exit fees, and are working on what level those are going to be. But the distributed generation community wasn't involved in those discussions because it was a direct access proceeding.

And I think it would be wise for the Commission to step up, given your participation in distributed generation issues, and point out the lack of conflict in the near term, and therefore, the lack of need to apply exit fees to distributed generation technologies.

PRESIDING MEMBER LAURIE: You're

suggesting that it would be inappropriate to use a short-term problem as the basis for long-term policy, is that the conclusion of your comment?

MS. BLUNDEN: Yes. And I'd like to reinforce, distributed generation is not contributing in any significant way to the problem that we have with the DWR contracts. The problem is just magnificently different between the direct access contracts, which represent 14 percent of load, and the distributed generation that's currently around and is likely to be added.

A lot of the distributed generation that's likely to be added will be under your renewable energy program emerging technologies account which are, you know, overwhelmingly small scale PV facilities, which, you know, if you were to look at the DWR contracts that you need to sell, they're not on peak, they're on shoulder.

And if you look at where the PV that's going to come on line is going to show up in the system, it's going to be on peak.

So, not only is there not a big problem from a volume perspective for DG in the short term, it also is kind of misdirected. The only thing that new DG is going to do in the state in

the next couple years is bring down peak load at residential households, and a few other larger facilities that manage to get in.

PRESIDING MEMBER LAURIE: Thank you very much. Comments are appreciated.

COMMISSIONER PERNELL: Yeah, one question before you --

PRESIDING MEMBER LAURIE: Wait, wait, wait.

COMMISSIONER PERNELL: -- leave, please.

MS. BLUNDEN: Oh, pardon me.

COMMISSIONER PERNELL: Your comments are more centered about PV, but there are other DG technologies.

MS. BLUNDEN: That's absolutely true.

COMMISSIONER PERNELL: And one final comment. Do you have a -- I understand what your position is on exit fees. What about interconnection fees?

MS. BLUNDEN: I'm probably not the right person to talk about interconnection fees. I'd encourage you to talk to the folks who have been directly involved in those discussions.

COMMISSIONER PERNELL: Okay, thank you.

PRESIDING MEMBER LAURIE: Thank you very

much. Mr. Figueroa, good morning.

MR. FIGUEROA: Good morning, Commissioner Laurie, Commissioner Pernell and staff. My name is Al Figueroa. I'm Vice President and Director of VFL Energy Solutions in San Diego. Our company is focused on economic and technical solutions for distributed generation.

I commend Scott and Mignon on the fine job in this draft plan. I think it's a great start, but there are a couple of things I'd like to suggest to move forward with it.

One of the issues that I'd like to bring up is to include as part of the distributed energy resource mix is energy storage. I think it's something that technology is coming down the road that is going to be very applicable to this, such as full batteries and things like that.

Other comments actually that I would like to focus today is on the barriers that some other panelists and other people have talked about with respect to barriers to the deployment of distributed generation.

I think there's a lot of policy being made right now or proposed that is, in fact, the incentivizing the distributed generation

deployment over deployment of distributed generation. Such as exit fees, standby fees, and bypassable -- DNDs, and so on. Interconnection costs, et cetera.

And I think that what I'd like to propose, and I have talked to Scott about this, is the expansion of your information process that's proposed in the plan. To make either very strategic focus groups directed to policymakers, such as the PUC and including maybe the Assembly. To heighten their awareness of both the technology that is applicable to distributed generation, as well as the efforts that are being put forth as policies, or proposed policies that would counter the measures of incentivizing the deployment of distributed generation.

And that completes my remarks; thank you.

PRESIDING MEMBER LAURIE: Thank you, Al, very much.

COMMISSIONER PERNELL: So are you suggesting that we, as part of this proceeding, brief other agencies and the Legislature as we go forward, or what the end result is?

MR. FIGUEROA: Commissioner, I think

that would be a very good -- yes, I do. And I think that would go a long ways in getting better understanding by the policymakers, the Assembly folks, of what are some of the issues pertaining to distributed generation deployment.

Whether it's the standby fees, or exit fees, interconnection costs, I think those are something that folks need to understand better for that.

The fees imposed right now by interconnection, which you asked the question to the previous speaker, actually the fees of the interconnection application are not exorbitant. It is some of the individual requirements by utilities to interconnect equipment that sometimes become extremely costly and make projects uneconomical.

PRESIDING MEMBER LAURIE: Thank you. Sir, you were sitting -- no, no, that's fine, Al. I was asking for comments from the folks on the right. You were sitting on the other right, so we'll get to the other right in a moment.

Yes, sir. You were first. And then we'll take the gentleman that was in the front row. Thank you.

MR. GOLDBERG: Thank you very much, Commissioners. My name is Dave Goldberg. I'm CEO of a company by the name of American DG, which is a provider and manager of distributed and cogeneration facilities for the commercial and light industrial sector, specializing in installations between 75 kW and 1 megawatt.

The CEC's draft strategic plan for distributed generation provides a much needed framework for the development of policies to enhance future energy security within the state and the surrounding regions.

A focus on the deployment of DG systems particularly those providing combined heat and power services that is cogeneration affords a highly effective strategy for countering runaway demand for electricity in the commercial sector.

It is important to understand that distributed energy is already currently feasible economically using clean, economically viable and proven technologies of natural gas reciprocating engines in the commercial sector.

With proper policy and initiatives enacted by the state major improvements in both energy conservation and air quality are possible

in the immediate future. Properly done, small scale cogeneration below 1 megawatt can reduce peak electrical demand, reduce overall consumption by as much as 40 percent, and displace more polluting forms of electrical generation, thereby cleaning the air more thoroughly.

To insure the success of distributed generation, the CEC should focus on three major areas in our opinion. One, which has been reiterated time and time again at these meetings is the creation of reasonable, cost effective and standardized interconnection requirements.

I think one of the problems with the interconnection requirements is not so much the regulatory costs as they're done, but the capriciousness involved. The fact that on a very highly capital-intensive business one really does not know, going into a project, what one's costs really are.

We need to prevent anti-competitive tactics by the utility industry. The possible capricious imposition of burdens such as stranded costs and/or standby charges on distributed generation eliminates the reasonably stable environment required to deploy distributed

generation.

In addition, any concepts of predatory pricing and other monopolistic tactics should be forthrightly opposed.

And, finally, the continuation and improvement of current incentive programs. This program currently is essential to help overcome the unfamiliarity and the erroneously perceived risks of distributed generation.

Improvements to the current plan should be made with broader incentives for properly installed cogeneration systems. For example, the inclusion of the capital costs of waste heat, activated absorption chillers would go far to help reduce peak summer demands, reduce fuel consumptions and provide a cleaner environment.

PRESIDING MEMBER LAURIE: Thank you, sir. Could you tell me again what your company does?

MR. GOLDBERG: We put in small scale, small scale by our definition is 75 kW to 1 megawatt, cogeneration systems.

PRESIDING MEMBER LAURIE: You put them in, you don't manufacture them?

MR. GOLDBERG: We assemble them and we

put them in. We have a sister company who also makes the primary cogeneration equipment, a company called TKAGEN. So they actually manufacture the basic generating model that we incorporate into our packages.

But we're not constrained by that. I mean we are capable of using other types of equipment if we feel that they are proper.

PRESIDING MEMBER LAURIE: You company is located where?

MR. GOLDBERG: Our company is currently located in Waltham, Massachusetts, though we are doing the packaging and manufacturing here in California, in southern California.

PRESIDING MEMBER LAURIE: Thank you, Mr. Goldberg. Commissioner Pernell.

COMMISSIONER PERNELL: No -- well, the equipment that you install are all below 1 megawatt?

MR. GOLDBERG: Yes, it is.

COMMISSIONER PERNELL: And the question earlier was in terms of a definition. If you were to apply a megawatt or kilowatt to the definition of distributed gen, would you advocate that being below 1 megawatt?

MR. GOLDBERG: Distributed generation? I would assume that that number should --

COMMISSIONER PERNELL: Of if there's no opinion, that's fine.

MR. GOLDBERG: -- probably be something larger than that, but probably smaller than the 20 megawatt definition that has been bandied around previously. But somewhere in that area.

COMMISSIONER PERNELL: Okay.

PRESIDING MEMBER LAURIE: Thank you, sir, very much.

MR. GOLDBERG: Thank you very much.

PRESIDING MEMBER LAURIE: Yes, sir.

MR. HOELLWARTH: Can you hear me?

(Off-the-record discussion.)

MR. HOELLWARTH: Good morning, Commissioners and staff.

PRESIDING MEMBER LAURIE: Good morning.

COMMISSIONER PERNELL: Good morning.

MR. HOELLWARTH: My name is Craig Hoellwarth; I'm the principal of a company called Green, Inc. We provide marketing, technology development and sustainable design services to the building industry in a number of facets.

Prior to being with Green, Inc., I was a

Supervisor of New Construction Services at SMUD. And prior to that a Director at the American Institute of Architects Research Corporation in Washington, D.C.

PRESIDING MEMBER LAURIE: I'm sorry, for the record, you name, again, please?

MR. HOELLWARTH: Craig Hoellwarth. I put my card in the box. I think in reviewing the plan, I have not reviewed it in detail, because I really just picked it up. But it looks like a good plan.

And I believe it has the structure that's needed to really move forward as the last presenter on the panel indicated. It's really not a technological question. It's more a policy or a strategy question.

I believe that your plan is probably the single most important strategy you're considering as a Commission right now for the future of California. I would make a quote of a manufacturer that I've worked with, UniSolar, they quoted that the sun every day provides the same amount of energy as we have known oil reserves in the world.

I would like to promote or support the

development of that sun power. It's a huge amount. And I think that it ought to be, in terms of renewable technologies, highlighted in your strategy. There's DG, and then there's DG renewable. And I think that it ought to have a higher, more prominent place in the strategy for the long term benefit of the state.

I think the goals are clear for both short and long term. But I think that in terms of definitions, the definition of renewable in the building industry has some confusion. People think of daylighting and they think of geothermal heat pumps and they think of a number of efficiency design passive strategies as renewable.

Yet usually when the term is used by the Commission it really indicates power generation. So, I would like to submit that perhaps a definition should include both the idea of megawatts, which is power generation, and negawatts which is power that is really provided by very efficient passive design strategies. Make sure that they're indicated in the plan.

Related to the idea of negawatts and high efficiency systems that you can count on for this peak reduction, I'd like to make a connection

to Title 24 and the efficiency standards.

I believe that the building industry would be interested in looking at tradeoffs in these standards for the design of new construction. I have talked with members of the industry and there is some interest there.

Specifically, an example might be on the residential side, allowing builders to include a bit more glass in their designs while allowing them to produce quite a bit more sunpower or renewable power to the building.

For instance, if -- every year there's 100,000 new homes built. Just take homes, if a 2 kilowatt, very small PV system was included on each one, and say you used a geothermal heat pump to use that electricity more efficiently, you would be providing the state with 400 megawatts of power every year. It would be, build a building, build a power plant. That means that in three years you'd have 1000. I think this last year conservation contributed some 3000 megawatts to reduce peak during the summertime.

So it could be a significant number, and it could have a significant impact. And I think the industry would be interested in how they could

participate in that. And that means on a broader scale than just the project-by-project basis. It has to be a policy; it has to be a program that really indicates to the industry, they want them to be involved in this kind of a process.

The last item that I'd like to comment on, I saw in there a strategy for cost/benefit, and there was some discussion about that here earlier this morning.

I believe that we really need a very significant element of making decisions on buildings, especially new construction, is the costing. And I believe that we should be really moving towards a life cycle cost basis for selecting our energy systems for facilities, especially new facilities.

And that really means looking at all the costs and the benefits, as somebody suggested this morning. And when I say all the costs, I mean systemwide. The central power plant is part of a broader system to deliver power to an individual building. All those costs ought to be included. The costs of planning, design, regulatory issues, safety, security for the system, all should be included so that there's a proper comparison.

Now, if I design a building with a PV system, for instance, and there are others, on a single building I have a distribution system right there. I have a power generating system. I have a shading system for my roof which creates even more efficiency.

And there are other strategies along those lines, but they're done right there at the project. And I can go out tomorrow and I can get a building permit for that. It may take two months, it may take six months, depending on the project. But, basically the structure is there to put in place.

And I would like to see the Commission really look at this idea of life cycle costing; the cost of the life cycle of the project, not of the individual element of the building. And to include costs that the customer is interested in.

If you are just going to look at the costs of energy that's only going to be part of the equation. That means that the higher cost, higher quality, longer term systems that are put in buildings initially aren't going to look so good.

But if you take into the consideration

maintenance costs, or long-term operating costs, which can be significant, it could actually pay for that system for the customer, as a system. Then it looks very economically viable.

Therefore, I believe that we should include all of those costs in the decisionmaking process, not just the costs of the energy savings, themselves.

With that, I will close and thank you very much. I think it's an excellent job that you've done so far, and I'd encourage you to continue this on further. Thank you.

PRESIDING MEMBER LAURIE: Thank you, sir, appreciate you being here very much.

MR. LANG: Mr. Commissioners, thank you very much. Can you hear me?

PRESIDING MEMBER LAURIE: Yes.

MR. LANG: Okay. I have to bend over a little bit further than most people.

First, I want to thank you all very much. I think you're doing a wonderful job of keeping a focus on a very timely and very important issue. And I want to extend that thank-you a little bit further and share a little background.

First off, my name is John Lang; I'm the Regional Sales Manager with Kawasaki Gas Turbines. And I'm able to stand here before you today because of the generosity of the California Energy Commission.

A lot of people in this room don't realize there was some funding provided by the CEC to Catalytica in Mountain View, California, a number of years ago. And Catalytica was able to develop and design a combustor which allows a gas turbine manufacturer to incorporate it into their system and run a system that virtually produces no NOx.

We currently have a commercially viable product as a result of that funding, and partially because of the funding, of course.

In your proposal you talk about the emission standards of 2007. We currently exceed and beat those emission standards. We guarantee for the State of California a 2.5 ppm of NOx. However, in reality we manufacture, depending upon the temperature and the environmental conditions we're working in, anywhere from .5 to 1.0 ppm.

So, we really have been able to commercialize and bring to reality the image, the

program that you've implemented years ago.

I want to tell you briefly a little bit about how we do it. We go into a process company that has a steam load and we try to get them to let us borrow their gas consumption for their normal boilers.

We take that gas, which is currently unfriendly to the environment, making high NOx because it's probably an old boiler. We run it through our cogen system. We give the customer back 11,000 pounds of steam and a byproduct that's 1400 kW of electricity.

It's a win/win situation for everyone. It's a win/win for the State of California. It's a win/win for the customers.

We've been meeting with numbers of customers in California that are pretty discouraged right now. Their electric bills are so high that one customer said to me the other day, I've got three options. Install self generation, move to Mexico, or go out of business. Because he built his business based on 6-cent electricity, and currently he's paying an average of 15 cents. And all of his profits go to that particular issue.

Gradually we're making inroads, and I would like to also thank you for posting our written comments on your internet. And we would like to become very much more involved with your organization and help give you some guidance and direction. Because I think you do provide a good vehicle.

And I think we're a living example of the fact that manufacturers, given the proper goals and directions, and an incentive, we can achieve the goals that are going to result in the win/win situations.

In closing, I would like to say that one of the issues that we do run into as we talk with our customers, a lot of people are very concerned about exit fees. They're waiting before they do install DG. They want to know what's going to happen to them because they're scared to death that they're going to end up paying for the electricity anyway, even though they're going to be generating it onsite.

And the interconnect, the rule 21 for the smaller generation is good, but we're in the 1.4 to 1 megawatt class, and we end up with issues between the customer and the utilities where we're

now to the point where we have to get utility approval before we can get an order.

And these are issues that I think are very legitimate; that do need to be addressed. And I think that you're doing a fine job at that.

Thank you.

PRESIDING MEMBER LAURIE: Yes, sir. Good morning.

MR. KAYE: Good morning, thank you, Mr. Chairman. My name is Loren Kaye; I'm with -- Pol Advocates. And we represent a fuel cell manufacturer called PlugPower. They manufacture a small stationary fuel cell systems.

And I wanted to add our voice to those who are commending the work that you and the staff have done on this strategic plan. We think it's really an excellent job, and I would also like to maybe take a step beyond that and commend the efforts that are being done by you and your staff on the DG issues generally, and the leadership the Commission has exhibited.

We're working directly with Mr. Tomashefsky in the rule 21 working group on some technology certification. We think that for a very difficult and kind of an early stage process

that they're working with, that they've been doing really an excellent job in bringing the utilities and other interested parties and manufacturers together and coming up with what we hope and believe will be a really good outcome.

So we just think that we hope you continue this leadership that you and the Commission have been working on.

I have a few comments we'd like to make on the report. I've got some late written comments here which we'll leave with you. And I won't repeat what some of the others have said, but echo some for emphasis, and then make some unique comments.

We want to encourage the very high priority that you have put on some of the impediments and barriers, particularly those that are found in government at the utilities. That will be -- nothing will be more destructive to the deployment of DG than government and institutional barriers.

I want to associate with the comments by Mr. Torres of FuelCell Energy both in what he said about incentives which are a bridging tool; it's a very important bridging tool, but it's only a

bridging tool. It's not something that's in our long-term business plan or business model.

But also to say, and this goes directly to some other activities at the Energy Commission, that the support for precommercial deployment is really important for a lot of these DG technologies, in particular fuel cells, where a lot of the research and development has been carried out in a very advanced stage. And now we're at the precommercial and your PIER program, in particular, I think is very important in allowing us to position ourselves to cross that last bridge by demonstrating what the technology can do, between R&D and commercialization.

So I think that's maybe not as discussed as thoroughly as it could be in the strategic plan.

And then also there was a discussion of utility ownership of DG, which wasn't something that I had really thought about while reading it, but in the discussion today I'd just like to point out that could be a good idea in helping to promote DG by allowing the utilities to have a stake in it.

Just by way of example, the Long Island

Power Authority, which is the electrical utility for Long Island, has purchased and is utilizing 75 of the PlugPower fuel cell systems at its substation in West Babylon, Long Island. And they are as much a partner in the development and deployment of DG in New York as anybody could hope to be. And I think that could serve to be a good example of what could happen in California.

We do have one quibble with the report, or with the draft plan. And that is in the characterization of proton exchange membrane fuel cells technologies, which is what the PlugPower fuel cell is.

The report characterizes the technology, well, actually uses the matrix developed by the California Power Authority in sort of ranking the various technologies as to their commercial viability.

And based on the request for bids, which was discussed a little bit earlier today, that the Power Authority undertook, they concluded that some fuel cell technologies were more commercially viable than others, based on the bids that they received.

And obviously I'm standing here because

they said that the proton exchange membrane technology was not as commercially competitive as some of the others.

And I'm not going to stand here and say that the Power Authority was wrong based on the information that it received. I think that it came to an understandable conclusion based on the information that was received.

But it is, in the context of a strategic plan for distributed generation, it's a narrowly focused source of information. And there were some particular -- there was a context to the Power Authority report, for example, efficiency. Some companies looked at efficiencies differently than other companies, and --

PRESIDING MEMBER LAURIE: Okay, well, let me interrupt.

MR. KAYE: Yes.

PRESIDING MEMBER LAURIE: We hear the concern and we'll take a look at it.

MR. KAYE: I hear you and I'll move on.

PRESIDING MEMBER LAURIE: I'm sorry, my concern is that we have a lot of folks, and we need to get into that discussion this afternoon. And so, let's try and avoid the engineering

discussions of all our technologies and deal with the policy questions that are contained in the draft report if we can, please.

MR. KAYE: Thank you, Mr. Chairman. I'll close by making one other comment that does not have anything to do with fuel cells, but is of general concern on distributed generation. And that is the other net metering, which was referenced earlier today.

And I will provide some writing to you separately on this. But I would urge you to maintain your attention to the net versus gross metering. And if somebody wants a term for that, behind the meter metering and billing that the ISO would like to subject self generation, cogeneration and perhaps even distributed generation to.

It could be just as big a financial disincentive to self generation as to parting load exit fees.

Thank you.

PRESIDING MEMBER LAURIE: Excellent, thank you, sir.

COMMISSIONER PERNELL: Thank you.

PRESIDING MEMBER LAURIE: Next. Scott,

what date do we want to impose as a deadline for written comments?

MR. TOMASHEFSKY: We actually had one.

(Laughter.)

MR. TOMASHEFSKY: On the 15th, although I've received some as early as this morning. So, I think the basic premise is that the earlier the better. The later it is, the less likely we'll be able to incorporate it.

PRESIDING MEMBER LAURIE: Because we're going to be making changes, and this does have to get to the full -- this will be heard on June 12th. And so it has to be to the Commission well before that time --

MR. TOMASHEFSKY: By Friday.

PRESIDING MEMBER LAURIE: -- so it's a question of timely submittal.

Good morning.

MR. TEAGUE: Good morning, Commissioners, Advisors, Staff, my name is Jonathan Teague. I'm with the Department of General Services, Energy Management Unit. And I'm here today to just say we appreciate very much the work that the Commission has done on this report. We think it's a valuable document. It's very

timely that the Commission is addressing its attention at this point.

We note that it calls for the formation of a distributed generation state agency coordination group. We'd be happy to be involved in that.

Our role, as you know, is not as a policymaking or rulemaking body, but really as a customer agency. But we are already deeply involved in distributed generation, having sponsored a number of these facilities at stage agency sites over the years.

We are looking at doing additional distributed generation development, and we're very interested in promoting the fullest range of choice for the consumer, including public sector agencies, for generation that is efficient, clean, renewable and cost effective.

That basically is the substance of my comments here, although I would like to echo what Mr. Kaye just said about the question of gross versus net, or behind the meter metering.

This is an issue that we've been following with great attention as the ISO has brought this forward in various proceedings. It's

one that we think has a lot of complexity behind it, but it's very clear just from the DG consumer side, it can load these projects that are already having a hard time making the leap to market with economic disincentives that will simply sink them.

That's something we're very sensitive to, as a group that's trying to actually get these projects deployed. So, we recommend that the Commission continue its focus on what the value proposition and the business case is for distributed generation in order to have the market mobilized to bring these technologies to bear.

We think that that's really the vehicle that will do it. We do think that government has a role, but it's clear that the private sector needs to have an economic basis to move these technologies forward.

And with that I'll close. Thank you very much.

PRESIDING MEMBER LAURIE: Thank you, sir. We know your office has always played a significant role in distributed generation issues, and we look forward to that continuing participation.

MR. TEAGUE: I will say we did submit

comments, not so much on the draft plan as it now stands, but on the outline. So, we appreciate the opportunity. Thank you.

PRESIDING MEMBER LAURIE: Thank you.

MR. MARTINI: Good afternoon, Commissioners.

PRESIDING MEMBER LAURIE: Good afternoon.

MR. MARTINI: My name is John Martini; I'm with the California Independent Petroleum Association. Appreciate the opportunity to make some comments. I will keep it brief since the hour is late.

We are also one of those organizations that failed to meet the deadline and we'll be submitting written comments before Friday. And I apologize that we were not able to make your deadline.

A couple of very brief comments. I wanted to associate myself with certainly some of the comments made in the report, but some of the comments that were made this morning by some of the presenters; then take exception with one particular comment I heard. And I'll start with that.

I want to start off by saying that our association, which consists of independent oil and gas producers located throughout California, is unique in the DG discussion. We think uniquely positioned to take advantage of distributed generation. And have been, in fact, one of the more aggressive industries in moving towards incorporating DG into our operations.

We are energy producers. But we are also energy producers that because of our air quality regulations in California, have to produce our oil and gas a little bit differently than other leading oil and gas states do, as this Commission is very well aware.

A majority of our oil fields in southern California are electrified because of air quality regulations. That certainly adds to our production costs and it is a unique factor that oil fields in Texas and Oklahoma don't typically have to deal with.

So, we are energy producers who are constantly having to find ways to lower our own energy costs so that we can remain competitive in the domestic market.

Towards that end we have essentially the

free fuel onsite that allows us to lower our energy costs, the associated gas that is associated with our oil production.

In many instances right now that gas is reinjected; sold to the utility system; or flared into the environment, which certainly is, I think everybody agrees, probably the least preferable of all the options. Yet for us to continue being oil producers, it is the way we do business. We see DG as a way to maybe change that paradigm slightly.

The comment I want to disagree with is the comment made by the representative from Edison this morning. And that comment that the Energy Commission should neither be as involved aggressively as you have been in this proceeding, or be an advocate for DG.

We disagree. We think there is a definite role for the Energy Commission, would welcome you to be an advocate for distributed generation. We think it's an appropriate role for this Commission to be involved in, but it's also appropriate public policy.

So, we take exception with that comment, and would encourage the Energy Commission to spend

as much time as you have on this issue and going forward. And we appreciate your leadership on it.

In regards to the points in the report that we would like to single out as being particularly appreciative of, we support the report's assessment that collaboration with private parties should take place. We think that's absolutely critical to have that state/private partnership moving forward to make sure that we realize the full potential of this industry in California towards meeting our energy needs.

And we'd like to offer our association and a subsidiary -- well, an affiliate association of ours, the California Oil Producers Electricity Cooperative, to be partners with the Energy Commission as you move through this process.

I'd also like to associate ourselves with comments found in the report about the challenges posed by the institutional and regulatory hurdles. I think it was the representative for the manufacturer, the Silicon Valley Manufacturers Association, who stated it best.

The IOUs still control the process. So,

it's critical, from our perspective, that the Energy Commission be involved and do its work in identifying hurdles and barriers to moving forward with distributed generation, because the IOUs do control the process. And it currently is not in their interests to allow DG to move forward on as aggressive a scale as we see it needs to happen.

We see serious environmental benefits through the incorporation of distributed generation in oil field operations by the opportunities to reduce flares, boilers, et cetera.

We lower our energy costs; we think the environment and the surrounding communities benefit tremendously if we're allowed to move into distributed generation and incorporate it on a larger scale than we currently are.

The regulatory uncertainty, as stated on page 19 of the report, is a major condition for us right now. When it comes to interconnection studies, we have found wildly disparate -- we have found a wide disparity, pardon me, in quotes on interconnection studies we've received from the utilities.

We've often seen quotes as low as $700

and oftentimes have seen quotes as high as $20,000 or $30,000 for just the study -- the interconnection study to connect a small DG unit.

There does not appear to be any consistency in the conversations our technical people have had with the utilities. And that certainly is a major barrier in our mind.

Last point I'd like to make, and it was again stated by one of the panelists this morning, that if anything we would encourage the Energy Commission to move quicker towards deployment rather than additional study.

We do have some opportunities in front of us, I think the technology is available, and we would certainly encourage the Energy Commission to ramp up its timeframe and move more towards deployment. We stand ready to incorporate it on a much quicker basis than the current time schedules allow.

Finally, we agree with the statement that California is poised to be a leader in the distributed generation industry. And being the fact that we're the fourth largest oil producing state in the nation, we believe our industry is poised to be one of those leaders in helping

develop this industry, as well.

PRESIDING MEMBER LAURIE: Thank you very much.

MR. MARTINI: Thank you.

PRESIDING MEMBER LAURIE: Anybody else on this side of the room? Seeing none, we'll go to the other side.

Scott, can you get somebody to turn off the air conditioner? There are some folks in the room that are chilly.

MR. TOMASHEFSKY: Sure.

(Pause.)

MR. KRICH: I'm Ken Krich; I'm with Sustainable Conservation. We're an environmental group working with --

PRESIDING MEMBER LAURIE: I'm sorry, say the organization again?

MR. KRICH: Sustainable Conservation.

PRESIDING MEMBER LAURIE: Thank you.

MR. KRICH: We're an environmental group working with California dairies to build methane digesters that produce electricity out of cow manure. And clear up a lot of environmental problems in the process.

We submitted some comments. Many of the

points have been heard today a number of times about rule 21 and how it works and standby charges. I won't repeat them.

We have a couple of unique comments. One of them has to do with selling the electricity. If you're under 1000 kilowatts on your nameplate, there is structurally no way to sell your electricity to an IOU in the State of California, unless you're under 100 kilowatts.

We fall in that 100 to 1000 kilowatt gap. So regardless of the current market or the current price, there's just no structural method available. Which is discouraging when we can produce more electricity than the dairies actually need.

Wind and solar solves this with net metering for the time being until the end of this year. If they don't get extended they will have the same problem.

The report describes some of the CARB hearings under AB-1298 proceedings. It could have been interpreted to read that technologies such as ours, which are perhaps never going to be free of producing NOx, would not be available in 2007, some of the ways the report was written.

But our technology produces a lot of cleaner water benefits, better fertilizer. When I say our technology, we are not technologists, we're simply trying to encourage an environmentally useful technology.

It actually burns up ROGs in the process. So we would hope that as that develops with the CARB they take into account the full environmental situation of the technology.

The third point is I wanted to just mention that there are many who think that the exercise of market power contributed to the high prices for electricity in California during our crisis. There's been some research on this area. I know it's a controversial point.

There are various ways to structure a market to reduce market power. One of them is to have a diversity of smaller independent generators. So we would propose adding another question on page 18, can market power in electrical generation be reduced by a DG industry with many independent suppliers.

Thank you.

PRESIDING MEMBER LAURIE: Thank you, sir, very much. Next, please. And we can go row-

by-row --

(Laughter.)

PRESIDING MEMBER LAURIE: We always save the best for last.

MR. PRABHU: Good afternoon, Commissioners, appreciate the opportunity to speak.

PRESIDING MEMBER LAURIE: Good morning, Edan.

MR. PRABHU: Congratulations, Scott and Mignon. My name is Edan Prabhu, and I'm here to speak as a private citizen and perhaps peacemaker.

And I also would like to introduce comments made by Mike Marlow, who did submit written comments.

Six years ago surprise, surprise, the biggest champions of distributed generation were PG&E, Southern Cal Edison. Since then somebody took away, and utilities used to have generating power plants, wires and meters.

Public policy took away the power plants. And the champions lost their internal champions and distributed generation, as a utility thing, started to decline.

What's happening today is big power

plants are difficult to site. Wires will not be put in in the near future. And people don't even like the looks of wires.

DG is going to happen because the alternatives have become big problems in modern society. Now what happens to these utilities. We took away their generators; their wires are becoming old; and we're starting to take away the usefulness of those wires with other technologies. They are starting to have nothing to do.

Next we'll take away their meters, maybe. It is no surprise that they are today arguing somewhat against DG. We're taking away their bread-and-butter. Okay?

The fix, and there's many other fixes needed, but one of the fixes has been brought up several times today, get the utilities the opportunity to play in the DG arena again. Okay?

Whether they do it by themselves; whether it's generating on substations; whether it's partnering with developers; whether it's investing in the servicing of DG.

The other thing is every time a DG goes on, it imposes a permanent, long-range responsibility on the utility. There is that

little bitty thing that could do something to my system, and I've got to give it long-range attention.

PRESIDING MEMBER LAURIE: Edan, question. On the point of allowing the utilities to play, can you identify a singular rulemaking, a singular action, legislative, regulatory, administrative, that allows that to happen, so one proclaims the desire to let utilities play the game. Where is that decision made? When is that decision made? Is that being made currently? Is it anticipated to be made in the future? Can you identify the singular action that would allow that to occur?

MR. PRABHU: I believe if public policy, whether through regulation or through legislation, can give utilities specific, clear incentives, that provide them with the opportunity to make money on installation of DG, whether themselves, or other people's DG, then that will happen.

Right now I know of no official policymaking process, because frankly, there is no champion, even within the utilities, to get them to own it. Because their generating folks are gone. Their R&D folks are gone. And there's no

internal champion long-range thinking on that issue.

Let me close with a short anecdote. You know, another big advantage of utilities to play is simply this. If you're pregnant it's hard to object to children in the neighborhood. Okay? The utilities were pregnant six, seven years ago, with this notion of DG. Okay?

PRESIDING MEMBER LAURIE: I have a really hard time relating to that anecdote.

(Laughter.)

MR. PRABHU: I mean it was a dream. There were speeches. I mean they really were excited about the DG baby several years ago.

Public policy caused them to have an abortion. They are now really really nervous about what this could do to them.

My comment to Southern California Edison is I'm doing my damndest to get you pregnant again.

Thank you.

(Laughter.)

PRESIDING MEMBER LAURIE: Thank you, Edan, very much. Morning, Eric.

MR. WONG: Good morning.

PRESIDING MEMBER LAURIE: How you doing with our air conditioning, Mr. T.

MR. TOMASHEFSKY: Well, let's see how long it takes them to -- the request has been made about that.

PRESIDING MEMBER LAURIE: Well, that --

MR. TOMASHEFSKY: And that's all I can do. So, it could happen --

PRESIDING MEMBER LAURIE: Who do we make that request to?

MR. TOMASHEFSKY: To Claude.

PRESIDING MEMBER LAURIE: Okay, and where is he?

MR. TOMASHEFSKY: Somewhere in the building.

(Laughter.)

MR. TOMASHEFSKY: And I don't want to tell you the -- how that is implemented. You may roll your eyes a little bit.

PRESIDING MEMBER LAURIE: Okay, we'll do our best, folks.

MR. TOMASHEFSKY: It's on its way.

PRESIDING MEMBER LAURIE: Mr. Wong, good morning.

MR. WONG: Good morning, Commissioners

and Advisors. It's nice to be here.

I have very reactive comments. I want to take up your last question to Edan about the ownership of distributed generation by utilities. That is squarely on the PUC's plate, part of the DG scoping OIR in 1998.

There were two parallel tracks started. Both of those tracks got derailed with the electricity crisis of the past summer. My understanding is that it is still on their plate and hopefully will be taken up again. But the Public Utilities Commission is responsible to answer the question.

I would offer the comment from one perspective, as a member of the DG community, and excuse me -- my name is Eric Wong; I'm the General Manager of combined energy systems for a Cummins distributorship which covers the northern two-thirds of California and Hawaii. This is Cummins West. And I am a seller of both distributed generation and cogeneration systems.

The prospective I wanted to offer on utility ownership is that there are utility affiliate rules in place. They're very strict. And so the comment I would make is that the parent

company would not be involved, it would be the utility affiliate.

And the anecdotal evidence that we can look at in terms of competition in a marketplace is that under PURPA cogeneration units went in, and this has been admitted by the utilities much quicker, because these companies, these private companies were leaner and quicker and could get the projects on the ground and operating faster than the utilities could at that time. Now, circumstances may change, but I give you that anecdote.

Now, as a seller of distributed generation and cogeneration units, I was intrigued by the interaction you had, Commissioner Laurie, with Manuel Alvarez of Edison, regarding the fact that you need to, or the assertion that you need to do both a cost analysis first before you can make any decisions, or upon which you can base any policy analysis.

You know, let's not -- I recommend that you not get involved or fall into the Rubic's Cube of doing a cost/benefit analysis. There's been lots of analyses done in the six years I've been involved in this, in this field since 1996, a lot

of them have been done by utilities, a lot have been done by utility-based organizations like Electric Edison Institute, EPRI, consumer groups, the Natural Resources Defense Council, the Regulatory Assistance Project, ratepayer groups across the board.

There's been lots and lots of studies and consultants have been making a lot of money on this. So, you know, what we need now is policy. And your draft plan articulates that policy, and that's what we need to move forward.

So, again, you know, I'm not trying to put down or dismiss cost/benefit analyses. They are important. But in the end, and I think other people will be speaking to this issue, is that the criteria which will ultimately be, I think, considered when you look at the departing load issue and exit fees, is you need ultra clean or clean distributed generation, and efficient cogeneration.

These are very important criteria, because as a seller in a marketplace, and I sit across the table where I'm responding to questions from a consumer, a customer that wants to buy distributed generation or cogeneration, the first

question is will it meet standards, air emission standards; will it meet noise standards. How efficient is it? Because the more efficient it is, the better my costs will be on return investment and payback.

And there are other vendors in the business that don't care about first costs. They care about reliable, durable equipment that can last 10 or 15 years. And these are the vendors that are selling kilowatt hours or therms. A whole lot different issue.

So, the acid test is in the marketplace and not in doing a lot of cost/benefit analyses before you move forward.

My last comment, and I want to move quickly here, I know we're short on time, is that the role of the Energy Commission is important. I fully support the state coordination group that is in the report. I would add to Jeff Byron's comment about any consumers groups, that you add every other group in there, environmental groups, ratepayer groups and the manufacturers into this.

This is the basis and essence of public/private partnerships, which was a success theme for the California Alliance of Distributed Energy

Resources. And with the state coordination group, and expanding the membership with that group, I think, we will again achieve many of the things that CADER set about to do. And which I think is sorely needed.

Thank you.

PRESIDING MEMBER LAURIE: Thank you, Eric, very much. Good to see you.

Jan.

MS. McFARLAND: Hello. Thank you for your time. My name's Jan McFarland; I'm with the Emergent Energy Group. I appreciate your time, Commissioners, staff and members of the public.

The Energy Commission has been very helpful in trying to promote DG to date, as well as advancing new technology. And I very much appreciate all of your efforts in this regard.

But I think something that we've missed and that's very important is to recognize that not all DG is the same in terms of efficiency and cleanliness. And that we need to accelerate and promote ultra, efficient DG technologies from the state.

And what I'm suggesting here is that we set ultra clean, efficient, not standard but

incentive program, if you will, that would have more significant, or pardon me, that would have higher performances required for these ultra clean technologies, in terms of lower emissions and increased efficiency.

Those lower emissions and increased efficiency would address critical public health and ratepayer concerns, as well as insure a foundation for economic and competitiveness for California's businesses.

And I would suggest that's an important public policy key for the Energy Commission to undertake. I would suggest that the ultra clean efficient incentives be targeted in terms of exempting ultra clean technologies from the legacy costs of deregulation. To target all the financial incentives from the state in this regard, as well as rate design for promoting efficiency and reduced emissions.

Ultra clean, efficient, state of the art technologies need to gain operating experience, much like we've seen in wind and other renewable technologies, in order for them to be perceived as an appropriate mechanism. I think we need several years of operating experience for the new

technologies.

And the other important factor for promoting ultra clean efficient technologies is to gain the economies of scale that some of the other folks spoke of today in terms of reducing costs.

Lastly, I had an opportunity in the last month or so, to travel to Denmark on a business trip. And I saw a system, electric power system, that went from zero to 65 percent DG since 1995. And I was reminded of what California might have looked like if we had invested in clean new technologies in 1995 through the Commission's efforts, along with the PUC on the BRPU.

And so that experience led me to believe, and experience in the past, that what we do in the near term is the most important thing. And that I would advocate that we have an aggressive commitment for ultra clean DG implementation in the next five years. And that we accelerate the implementation of new technologies.

And that's my comments, thank you.

PRESIDING MEMBER LAURIE: Thank you, Jan.

COMMISSIONER PERNELL: I have a

question.

PRESIDING MEMBER LAURIE: Question, Ms. McFarland.

COMMISSIONER PERNELL: And I think everyone would agree that we need ultra clean distributed gen, but how would you address the gentleman from the dairy industry who can certainly suggest other benefits through the digester gas and cleaning up the water and et cetera? So there are other distributed gen technologies that have other benefits that are not as ultra clean as you're suggesting.

MS. McFARLAND: I'm not an expert on the biogas technology. I did see a fair amount of it in Denmark. And based on the costs that I saw, I think that at least in the technologies I was looking at that there would have to be advanced emission control technologies put to reduce the NOx, because, you know, I think we're going to have to do a lot of different approaches.

So I don't think ultra clean efficient would preclude it, biogas technologies. But I'm also -- we haven't worked out the details on those kinds of things, either.

COMMISSIONER PERNELL: All right, but

they would have to do a better job in controlling the NOx is --

MS. McFARLAND: I don't think you can forgive NOx emissions here in this state given our ozone and public health and ecosystem concerns.

COMMISSIONER PERNELL: Thank you.

PRESIDING MEMBER LAURIE: Thank you, Jan. I think we'll start with the back row and move --

(Laughter.)

MR. BATMALE: Hi, my name is J.P. Batmale. I'm with RealEnergy. We're a California firm. We have 4.6 megawatts actually operating in California of cogen and solar; and another 8.6 under construction.

And aside from Edan's very vivid graphic representation or picture of what he'd like to -- his relationship with SCE, I'm very happy to be here today.

Just some quick comments. The representative from SCE made a comment, direct access and the Legislature said that ending it was in the public interest. I wanted to just remind the Commissioners and the people here that the Legislature also said in SB-1298, in SB-28X, that

DG was positive in nature, it was in the public benefit.

And it seems there's some attempt to play off, or to couple direct access with DG. And I hope that the CEC continues not to fall under that.

We received our first incentive check through the AB-970 program for a CHP site in Long Beach. And I wanted to comment that just from the, there's a lot of talk right now about fixing the incentive program, and just from the level three, as far as CHP goes, one of the things, part of my purview, I would recommend that just for that one level of technology, that maybe the Energy Commission look into going to a straight dollar-per-kilowatt basis.

Going by project cost puts both sides in an unnecessarily adversarial role. It also provides, while we didn't do this, a disincentive to keep costs down. It also, anytime you have a project that is too high in costs it looks like you're trying to game the system.

So I wanted to possibly put that, just for that level technology. I can't speak to the solar or the fuel cell, we haven't done that. But

I think possibly if reform was coming that would be a good reform to do.

It would also lessen our paperwork. I submitted a four and a half to five inch binder on each project just trying to justify all the costs.

And then echoing what we submitted in comments, and also from what we heard today from just about everybody, really deployment is the issue. In going back, one of the greatest barriers to development is again, not the technology, but what we found is truly the tariff, and the tariff structure.

Let me give you an example. Standby fees have been waived, and we're actually looking at the bills and it's gone in most of the territories. However, demand charges have gone up. KVAR charges have gone up. And now there's the possibility of physical insurance.

So, when you look at deployment you can't take away, it's not the interconnection. We found that through rule 21 the interconnection policy has been much improved; the utilities are very willing to work with us. You know, there is some give and take, and there's some easier projects to do than others.

But we've found that the true barrier to deployment really is the tariff and the tariff structure. Demand charges are assessed. Peak demand charges are assessed on a monthly basis, not on a daily basis. Anyone from solar to fuel cell can lose half the revenue in a month if you just miss one peak demand charge.

So, that, I don't think -- I mean there's a lot of talk about tariffs not being under the purview of the CEC. But if you are going to be an arbitrator and are going to provide information so there's not an asymmetry in the marketplace, rates and tariffs almost have to be looked at. And I would put that out there.

Also, as far as deployment goes, it is -- we are funded, we're a privately funded company through capital markets, through equity investments. The private market is beginning to look at it. And, again, the deployment is the big issue.

And then finally, RealEnergy has created over 50 jobs, full-time jobs, just in our firm in the State of California. So, the DG marketplace is slowly lurching forward, and the CEC has a strong role to play.

On ownership, like Eric said, the second phase of the DG OIR is the place where that can be looked at. From RealEnergy's perspective, as long as it's on the utility side of the meter that's not an issue. We think as soon as they start coming out of the customer's side of the meter, there's a conflict of interest. And the utility affiliates, we think, are perfectly situated for that.

And then you posed a list of questions for the exit fees, and I echo everything that was said by Julie Blunden from Xenergy.

But lastly, could DG have a positive impact on system reliability during peak periods if such generator is required to operate during likely system peak hours. I would argue that indeed we are having an effect. Our cogeneration sites in Long Beach and San Diego are already -- and Costa Mesa are having a positive impact right now. They're running the shoulder of the peak.

They're taking down the total building load by over half in some cases. And the energy efficiency from the CHP is reducing total onsite load by up to 10 percent in some cases. And we're using, you know, absorption chiller technology

that feeds into the other chillers and displaces them. If there's a heat load on site, going through heat exchangers.

But we are lessening the total footprint of that building, and we're doing it in a very clean fashion.

So that is our comments. We hope the CEC will continue to play a strong role. DG is not a given, but it does have a large role to play. And that's it.

PRESIDING MEMBER LAURIE: Thank you, we appreciate RealEnergy's continuous comment.

COMMISSIONER PERNELL: Thank you.

PRESIDING MEMBER LAURIE: Next. Mr. White, did you want to comment, sir?

MR. WHITE: Thank you, Mr. Chairman, Commissioner Pernell. I'm John White, here today representing the Center for Energy Efficient and Renewable Technologies and the Natural Resources Defense Council.

We submitted written comments on the plan, and I just want to try to summarize a couple of key points.

We're glad that the Commission has recognized the importance of making environmental

quality a key factor in this strategy, which is completely consistent with legislative intent, as expressed in SB-1298, which states it is in the public interest to encourage the deployment of distributed generation technology in a way that has a positive impact on air quality.

However, we'd caution the CEC not to lose sight of the fact that -- in the specifics of its plan. There are several sections of the plan where the CEC appears to question whether DG can or should be held to the strictest emission standards, and whether the CEC should provide preferences for the cleanest DG units.

Most of our comments are focused on these areas. We do think that the interagency coordination, as with so much of what we're doing in energy and state government, is an area that needs a lot of work. Of course, that's not something you can make happen by yourselves, but I think it's obvious to all of us in the intervenor category that a great deal of improvement needs to be done in execution of implementation between the Energy Commission, the Power Authority, Public Utilities Commission, utilities.

It's not going to work if we don't get

all on the same page. And I appreciate that the Commission has seen that need. And we'd like to do what we can to help in that regard.

COMMISSIONER PERNELL: John, on that question, are you -- which would you prefer, an interagency coordinating council, or a public/ private coordinating body?

MR. WHITE: At this point the private sector is coordinating on its own. And there's been a number of initiatives led by RealEnergy and some others to kind of focus, private sector focus, try to get them coherent and cohesive.

The problem really is connecting the dots between state agencies. And in particular, you know, we're in a situation where the planning and analytical capacity on some of these things rests with the CEC, along with some of the incentive programs.

We've also got incentive programs on DG at the PUC. At the very same time the PUC's incenting programs, they're starting other proceedings that are going to add, you know, significant costs to the very things they're trying to incent.

And I don't think anybody's looking at

the whole thing. And I think that to the extent that you can, and maybe doing that privately first, or at least getting at the Commissioner level, some degree of cooperation and follow-through at the staff working level, so that we can have a coherent state set of actions.

Because I think you'll find that the people trying to do these kinds of projects see great uncertainty on the part of actions or inactions or threatened actions by state government. And yet, since it's not all in your jurisdiction, you have to have a willing partner in the other agencies, and that's something that has to require, dare I say it, some leadership on the part of the Administration, perhaps.

One of the observations that I had about the Power Authority's plan, which I actually had some enthusiasm for, was it was a great plan except that the implementation of it really didn't rest with the Power Authority alone, but rather with its sister agencies.

And one of the things I told Ms. Dahl, and I've said again recently, is if you guys could get state government working together on implementing that broad vision that we all seem to

share, in which DG figures prominently in the Power Authority's vision, but what we don't need is for all of us to have three different venues.

Going on, talking about DG with those three different venues, don't connect up the dots and work together. Then it's like three times the work for us, and no output.

So, --

COMMISSIONER PERNELL: I understand the frustration. But I guess my question to you is are you suggesting that all of the agencies work together and don't include the private sector, whom is --

MR. WHITE: No, no, I just think that the private sector is ready and able and willing to participate. And the private sector include the nongovernmental organization sector of the environmental community.

The problem isn't getting them to engage. The problem is taking that input and being able to execute and implement. Okay, I have no doubt that you all will be transparent and open and accessible, especially as this Commission is to the private sector and the public.

The problem is we don't need a bunch of

input if it isn't going to get us somewhere. Okay, we saw in The Sacramento Bee article this week, in Dan Weintraub's column, which if you haven't seen it, I just stumbled across it yesterday. It talks about a gentleman that was a victim of the energy crisis; a cast iron, casting facility down in the Bay Area that decided he was getting interrupted too much and paying too much, and thought he might want to have a fuel cell.

PRESIDING MEMBER LAURIE: Certainly the concern is that we will write our report, the major incentive for which is attempting to develop some consensus among the agencies. Clearly that's not going to happen at least in any detail.

Certainly, I was disappointed to see that we're not going to address regulatory reform this year. And I would anticipate until we determine who our energy leader is in this state, then we're not going to have implementation.

MR. WHITE: Well, in fairness to our friends in both the Governor's Office and in the PUC, they've had a hell of a year to live with. The legacy of the long-term contracts, which we had the misfortunate task of pointing out, is part of --

PRESIDING MEMBER LAURIE: Well, let me --

MR. WHITE: -- what we're living with, okay. And so in the end --

PRESIDING MEMBER LAURIE: Yeah, I --

MR. WHITE: -- we're navigating in a difficult sea. And we just have to accept --

PRESIDING MEMBER LAURIE: Yeah, let me take issue with that for a minute, because I -- a lot of folks have had a difficult year. And I've heard, and I'll take this opportunity to repeat, a discussion that was provided by one of the Administration's people, and they talked about the fact that they could not address these larger issues because they spent the last two years in the trenches. Using that term verbatim.

Well, you know, I have no sympathy for that, because it is a leader's responsibility to get their tail out of the trenches and leave the trenches to other folks, such as us. And get the generals, back in headquarters somewhere, thinking about these things so that we can get out of the trenches. That's their responsibility.

So, yeah, I know there's a lot been going on, but until others are given the ability

to act within their own jurisdiction and leave the big questions to the commanders, well, you know, we're not going to get very far.

So, that's not a sympathetic argument to me.

MR. WHITE: Speaking as one who feels like a casualty of those wars, we have to remember, too, that the problems we have are, in part, because we don't have a good DG policy. Because we don't have a good renewables policy at a time when our dependence on natural gas is rising to a level of extreme vulnerability over the next 10 to 15 years.

That means that we have to act and not have the crisis be the excuse for not acting. And I agree with that sentiment. And also that these are things that will help. The things we're talking about are things that will help us avoid the next crisis of reliability, of supply, of efficiency and environment.

I'd like to, if I could, try to finish with our listing of concerns. A key area where the Commission has jurisdiction and resources is investment in public energy interest -- public interest research and programs.

We think you could have a big impact there. However, we don't want you to focus on questions that have already been answered, such as what standards should be set, which we believe ARB has already done. But focus on helping the DG technologies to meet these most stringent standards.

In the deployment opportunity section under environmental issues, the CEC questions whether DG can achieve the standards set. Again, we think that that decision has been made, that the key really, we also want to disagree that the emission standards are going to exclude certain technologies.

A recently completed analysis by the Energy Nexus Group has shown that this is not necessarily true. Nearly all technologies have the potential to meet the 2003 and 2007 standards when installed in combined heat and power applications.

Now, the industry didn't want ARB to set an efficiency standard, because they didn't want to be bound by the combined heat and power application. But that's where we need to drive them, whether they want to go there or not. Okay,

because we need that efficiency bonus. Or these technologies aren't going to give us all the potential that they could.

We think that therefore rather than questioning and reopening the jurisdictional discussion with ARB, that you really should focus your research dollars on helping achieve these emissions performance levels as good or better than what's required by the standards.

But we also think that we need to develop a strategy of incentives for zero and near-zero emission technologies, not unlike the program we have on the vehicle side, where ZEVs were good, but near-ZEVs were almost as good.

And we think that it's important that these technologies especially not get lost in the shuffle. That there be a recognition that they provide additional value. And we think that discussion needs to be fleshed out a bit.

We think that the opportunity exists to combine the R&D work, the public benefits work, which I believe the Commission is going to end up with some discretion about. I think it's appropriate, based on some conversations we've had with some consumer folks, to consider when we're

moving the dollars around on the investment plan, as we anticipate the legislation will allow you to do, that you consider adding some additional incentives, particularly for the nonrenewable zero or near-zero technologies like fuel cells.

The customer credit fund, for example, may prove to be a source of additional dollars that wouldn't cause you to lose dollars from the existing categories, for example. Since we don't have direct access and so forth and so on.

We think also that we need -- the opponents of DG talk a lot about double dipping, and I recognize that we do need to consider all of the incentives that are available to people when we're considering what additional incentives they need.

But I think that we believe that helping people do the cleanest technologies so we can show that they work, and are feasible, remains a priority. And, again, we would again point to the preamble of SB-1298, which talks about the need to have distributed generation that has a positive impact on air quality, not just break even, but positive.

We think, too, that while expanding net

metering beyond PV and wind may be controversial with folks for obvious reason, starting with utilities who don't want the existing net metering to be continued, net metering has become a proxy for not getting jerked around in the process of interconnection.

And so, if maybe net metering is the kind of the fast track, you know, if you're a net metered, maybe what we need to consider is a kind of a streamlined interconnection approval process for those very clean technologies that I'm referring to, so that we recognize that when you got a zero or near-zero, an efficient, clean system, that one ought to not be subject to delays and difficulties.

You know, obviously all the technologies that offer value to customers and value to the system ought to be fast-tracked when we can. But, at a minimum, I think we ought to take a look at how the net metering experience, separate from the question of getting paid back from the grid, that net metering really has been the way that stuff got done quickly.

And I know that that's the spirit of 28X and some of the other statutes, was to create a

pathway so that the customers and the vendors have some certainty, know what's expected of them, and can get the job done.

At the same time I think the utilities have been through a difficult time. Their sensitivity on cost recovery is understandable. They also have lost a lot of personnel. I was in a conference in Boulder where one of the things, the practical problem is the people don't necessarily still have the jobs that knew the system on the grid, on the distribution side.

And so we need to consider the capacity of the utilities to participate. And I think find a way to engage them in a constructive dialogue. I don't know if it is ownership is the key issue. But clearly, I think the other part of the regulatory thing at the PUC that's being considered is that we're going to consider decoupling again, of utility revenues from volume.

Now, that could be positive as a means, traditionally NRDC's belief that decoupling utility revenues from volume of sales will make them less hostile to lost revenue from energy efficiency and DG.

On the other hand, I think you've got to

be careful that you don't create fixed charges in that process that disincent the customer from participating in the acquisition of the system.

So, I do think the utilities need to be listened to. There has been a tendency for this debate to break down into opposition, the DG community versus the utilities.

If we're going to be successful we've got to have, we have to find a way for the utilities to embrace and participate. And, you know, maybe that comes by recognizing that not all DG in all places has the same benefit, you know, not unlike our friends in the biomass community who have tended to have all of their benefits be ascribed to all of the technologies.

In the case of DG, some DG in some places is worth more than the other kind of DG in other places. And maybe we need to figure out a way to capture that through some locational recognition. Maybe it could start with the Silicon Valley up to San Francisco as a DG enterprise zone. Where we'd say, you know, we know that corridor is grid-constrained and would benefit from DG that's located. Maybe we could do that first while we're considering what works in

Fresno or other less congested places.

So those are things that I think, by being involved with all the stakeholders, and your usual transparent and open public process, if you all can help the utilities and the PUC engage with the rest of us in a constructive fashion, hopefully we can move forward.

Because I think these technologies are very much needed for our future reliability, our future environmental quality. And yet, we're entering a time of new uncertainty because the market structure and the government structure remains unresolved.

And so it's a difficult time to participate for all of us. And I think one of the things the Commission has been able to do on occasion is to do the good interagency work, connect the dots, get the staff people talking to each other, get the data, get people going, and try to get some things accomplished.

Because I have a feeling at some point the leadership that we all feel that we've been missing is going to arrive, if for no other reason, in response to further dire circumstances.

Thank you.

PRESIDING MEMBER LAURIE: Thank you, Mr. White, very much.

Anybody else on this side of the room? Thank you very much. If not, I'm prepared to stay till 1:30, Robert. How long can you stay? We want to have a discussion on the PUC exit fee question. Can you stay a few minutes?

COMMISSIONER PERNELL: Yeah, absolutely. 1:30 is my next --

PRESIDING MEMBER LAURIE: Yeah, we'll go to 1:30.

And the purpose of this issue is to get your input on comments on the issue regarding the exit fees being discussed at the PUC.

Scott, if you could take one minute and summarize the issue before us, and then if you folks have input, please provide it. But please provide it in a summary fashion because we're out of time.

MR. TOMASHEFSKY: Thank you. And thank you for sticking out the time here.

What you see on the screen probably you can't see it up here, you can see it on that one. I can turn this down for a second.

This is the text from the April 5th ALJ

ruling that defines the scope of what the exit fee issues are for departing load. And you can read that as I talk.

But, basically the issue of exit fees has been generally attached to the direct access issue, and as that process has proceeded, the issue of well, should there be some cost responsibility for departing load customers.

The distinction that is notable is that in the direct access proceeding it's been focused more on the DWR costs. What this ruling does is it expands the notion of what exit fees would apply to departing load, not only to DWR costs, but anything else. As they say, any other relevant cost that may be identified as parties'.

The Commission is intending on filing testimony on June 6th, as I know a lot of folks in this room are. And we thought that this would be an opportunity to just have a general discussion on those issues. And if it serves any benefit to improving the efficiency of the evidentiary hearings the PUC has, then that's great.

So, that's the context behind it. I guess what we're looking for is perhaps someone to start the discussion, to see what their

perspectives are on exit fees.

PRESIDING MEMBER LAURIE: Okay, if we can get the lights back on, please.

MR. TOMASHEFSKY: I'll put the lights back on.

PRESIDING MEMBER LAURIE: And again, we only have a half hour. First of all, can I see, from a show of hands, those folks who are going to desire to comment? Yeah, quite a few. So, just a couple minutes.

Jeff, please.

MR. BYRON: Thank you, Commissioners, I'll confine my comments to three minutes.

I'm looking at your question two, Scott. I'm reminded of a story I heard when I was a young boy about three men traveling on a business trip. They needed a hotel room for the night and the proprietor charged them $30. They each put in $10. And he realized he'd overcharged them $5. Gave the bell boy $5.

The bell boy didn't know how to divide up $5 into three people, so he kept $2 and gave $3 back to the men. Ten minus one, they each ended up paying $9. Nine times three is 27, plus the bell boy's $2 is $29. Where did the other dollar

go?

Now, if you're still perplexed by that, as I am to this day, then you've bought into the way I have framed the question, and the way I account for all these funds.

I would like to offer that this --

PRESIDING MEMBER LAURIE: Well, you San Jose guys just really think on a different level.

(Laughter.)

MR. BYRON: Don't need to repeat that. I would like to suggest that the issue around exit fees and departing loads has been framed in a very interesting way.

If I understand what exit fees are all about, it's paying for moneys we've already spent, and moneys we're planning on spending going forward. We know who spent the kilowatt hours for the money that accounts for the old stuff. And we have all kinds of projections going forward for the next 15 or 20 years that vary between two to maybe four or five cents a kilowatt hour.

I say that the state's practice of renegotiating long-term contracts, perhaps even putting them on the market and selling them, so we know what the costs are that we've incurred as a

result of this debacle. And let's call this what it is. It's not an exit fee going forward for customers that may either be doing -- I'll stop there.

Let's call it what it is, it's a mistake. And it needs to be accounted for in a different way than charging customers going forward.

This entire discussion about departing load, what is it? Is it voluntary load reduction? Is it energy efficiency? Is it the economic downturn from customers that are not using as much electricity because they're not doing as much business? Is it somebody that decides to move out of the state; do they still owe the money going forward for the next 15 years? Is i somebody that goes out of business? Do they still owe the state for electricity they're no longer generating?

My analogy again, the way we framed the question is very awkward and it's the wrong question. We need to reframe the question on behalf of the leadership of the state so they understand that we know what this is all about. It's covering up for the mistakes that we made over the last 18 months.

Thank you.

PRESIDING MEMBER LAURIE: Thank you, Jeff. Next. No particular order.

MR. REDLINGER: Hello. I'm Robert Redlinger with CMS Viron Energy Services. We're a large energy service company; we've done over $100 million of energy projects in California, energy efficiency and DG projects.

One of the things that we really work at is trying to integrate energy efficiency and DG. We feel that that makes the most sense, the most economic and the best for the environment.

And I think the main point I'd like to make is that as somebody who's really in the trenches there, trying to put in DG and trying to put in energy efficiency there is no really clear demarcation between energy efficiency and DG and fuel switching. They're all part of the same spectrum.

And I'd like to give you -- I can come up with lots of examples, but I'd like to give you one quick example. If somebody has an electric chiller to cool their facility, it's an electric load. They could put in direct fired gas absorption chillers, just be a straight fuel

switch. But they wouldn't be using electricity anymore, they'd be using gas through their cooling. And presumably they would not be subject to the exit fee.

It seems that people want to continue to have energy efficiency, the departing load is, what people seem to be implying is that's for DG in particular, and not fuel switching, it seems.

So, an absorption chiller you'd be okay. It's not that efficient, but you wouldn't get an exit fee.

Or you could put in a gas engine driven chiller where you have an engine that's directly driving the chiller. Again, it's not that efficient. You got that engine running, but there's no exit fee.

But if you decide to take that engine to generate electricity and use the waste heat to run an absorber, which is the most energy efficient solution, then suddenly you're generating electricity so you get hit with the exit fee.

And what ends up happening is you end up discouraging the most energy efficient solution, and encouraging people to do something else. Okay. And that's not just a speculative example.

I actually have a customer right now who's getting ready to sign a contract to implement cogen. They're interested in putting in cogen; it would be at a central plant facility, which they would then use the waste heat for absorption cooling for air conditioning.

And now that these exit fee issues have come up, now suddenly they're panicking. And they're saying, well, wait a minute, what's going to happen with the departing load fees. Maybe we shouldn't, maybe it's just too risky, maybe we should forget about doing cogen and we'll just put in absorption chillers.

And which would be the least efficient solution. And, you know, I'm trying to talk them out of doing that, but, you know, it's not easy for me to give them a lot of assurance when this kind of uncertainty is, you know, is out there from the state.

Now, the other issue is the state, as we have just talked about with the DWR costs and all the other things, the state is interested in protecting its coffers; doesn't want to be stranded with a lot of, you know, these stranded costs of long-term contracts.

But the idea that you can completely avoid departing load, from having departing load is, I think, a fiction. As was mentioned, you can't prevent people from going out of business. I had another customer last summer who asked me to come out to his facility, an industrial facility. I went out there and the thing was completely shut down. And he said, I just can't afford to operate anymore. The only way I can continue to operate is if I put in cogen.

Well, that load had already departed. It had departed because he had shut down. And that also puts people out of work and hurts the state coffers.

And, the load is going to go in one way or another. It's what economists call price elasticity of demand. If you raise the electricity prices by 30 or 50 percent, people will figure out some way to reduce their load.

And so the real issue is, you know, you can't prevent that load departing in one way or another. The key is if it's going to depart, let's have it happen in a way that is the most cost effective, the most environmentally benign, the most energy efficient. And that is things

like cogen. It's DG.

And so, you know, I'd just like to urge that the state not make this arbitrary distinction between energy efficiency and DG. That this is an integrated thing, and a lot of times the most energy efficient and environmentally benign solution is going to be with distributed generation.

Thank you.

PRESIDING MEMBER LAURIE: Excellent, thank you, sir.

COMMISSIONER PERNELL: Thank you.

MR. FIGUEROA: Commissioners, Staff, my name is Al Figueroa, again. And I want to basically echo what's been said already about the exiting fees and how it's being proposed, but more to the point that I raised earlier this morning, it is exactly this type of legislation proposal that is potentially going to be detrimental to the deployment of distributed generation.

And I urge you to not consider this, or to fight this process, because it is something that's counter to the incentives and the policies and to all the other process that is being promoted to promote the deployment of distributed

generation.

And I think one more comment as far as the incentives for utilities to participate in distributed generation, I think it's imperative that we provide some kind of incentives for them to do so in order for also the adoption of distributed generation.

Thank you.

PRESIDING MEMBER LAURIE: Thank you, Al. Now, let me hear from the utilities at this point, Dennis and --

DR. KEANE: Dennis Keane, PG&E. As a previous speaker mentioned, the state's in a very difficult situation right now. We have these very expensive contracts. And the Commission's going to be dealing with this issue. And I think, you know, it basically boils down to a question of fairness.

Customers received the benefit of DWR entering the market last year in the form of paying rates that didn't recover anywhere close to what the cost of the power was, because DWR basically floated that for them.

In addition, there are going to be some going forward costs of DWR power, probably. You

know, nobody knows what the market price is going to be, but it looks like these will be above market, maybe considerably above.

So the PUC is, you know, facing the issue should people be allowed to escape these charges if they benefitted from DWR entering the market. So the question is should customers that choose to go on direct access be allowed to escape. Should customers that choose to municipalize be allowed to escape? Should customers that connect to irrigation districts that are going around picking off utility customers, should they be allowed to escape? Should customers that install DG be allowed to escape?

Fairness, I think, would argue that everybody should share in that burden.

Yesterday the Governor's Office put --

PRESIDING MEMBER LAURIE: Are you talking about the burden already created?

DR. KEANE: Yeah.

PRESIDING MEMBER LAURIE: Well, why should the burden already created affect long-term future energy policy?

DR. KEANE: The customers that are

utility customers now, since DWR stepped into the market, purchasing power, thinking they were going to have to supply those customers, you can make the argument that it's fair that those customers should pay. If I'm understanding your question correctly.

PRESIDING MEMBER LAURIE: Okay, but the issue of direct access is an issue that is a long-term energy policy. And if the problem, if the identifiable problem is payback, is monetary accountability for a past action, should a past action -- and I'm not suggesting there shouldn't be monetary recovery in some fashion -- but, should the solution affect and dominate and determine long-term energy policy, or is there some other solution available that will not affect long-term energy policy?

DR. KEANE: There may be another solution, I'm not saying there isn't. But what the PUC has before it is the issue of should we carve out exemptions for some types of departing load customers. If they do, what are the impacts on the other customers that will have to pay more as a result.

Now, there are, you know, good policy

reasons, perhaps, for carving out such exemptions. I'm not saying there aren't. But I do know that the Governor's Office yesterday issued this language in a bill, AB-117, that basically states that no one should be allowed to escape. So that's kind of where they're coming from.

I think it's going to be a difficult decision for the Commission. We, at PG&E, are wrestling with it ourselves right now. We have about two and a half weeks to file our own testimony. We haven't really reached a decision, ourselves, on what we're going to advocate.

PRESIDING MEMBER LAURIE: Thank you, Dennis.

COMMISSIONER PERNELL: Dennis, I have kind of a different question. And that is what happens to your system, the reliability of the grid system if there's a mass exit off the system?

DR. KEANE: To distributed generation or --

COMMISSIONER PERNELL: Well, yeah, to distributed generation. Hypothetically, if cost goes up and most of the manufacturing, commercial and industrial customers decide to go to onsite distributed gen, what does that do to the

reliability of your system?

DR. KEANE: It really depends on the unique circumstances in each customer's case. Generally customers that do that don't just take their entire load off the utility system. They will generate a portion of their load, remain connected to get the rest of their load from the utility.

And even for the portion that they're generating they generally want the utility to stand by and leave the wires in place and the capacity in place to serve them when their generators go down.

COMMISSIONER PERNELL: So it wouldn't adversely affect the reliability of your system?

DR. KEANE: I think in some situation -- I'm not a distribution planner, but my understanding is in some situations it has no effect. And in some situations it can make it worse. Depending on, I think, like the circuit, how it's loaded with neighboring customers, things like that. It's really case-by-case specific.

And there are situations where it can benefit, as well.

COMMISSIONER PERNELL: Okay.

PRESIDING MEMBER LAURIE: Manuel.

MR. ALVAREZ: Manuel Alvarez, Southern California Edison. Let me give a disclaimer first, I mean the comments I'm offering are provisional. I mean we are in the middle of formulating our testimony and our filing with the PUC. So, with that, I'll share some of the thoughts we may have.

I guess the first thing is the question of, you know, what the costs are, and, you know, who caused the costs and how the costs are carried. As long as they're there, basically they have to be paid.

And so the first principle we would offer is basically one of equity. Everyone should pay for those costs that are incurred by the State of California to get us through our crisis. Escaping those costs basically we're exempting any particular entity from exit fees is basically a cost-shifting strategy.

So as long as those costs still remain on the books, or in place, then somebody else has to pay. So those are an issue that I think I'd want to keep in mind and then figure out who that payment is going to land on. It's an important

criteria that you need to deal with.

I don't think I can answer your question, Commissioner Pernell, about the departing load. If a whole bunch of load, whether reliability would be impacted or not, I think it's a complicated question. I've asked one of our gentlemen here who's involved with that, it definitely would take some thinking on our part in terms of what the implications would be if a significant amount of load were to depart.

And figuring out what significant is, is part of that question. What the consequences would be. But it would be significant. If nothing else, you'll have exposed costs that will have to be recovered in some fashion, so there will be another method of cost allocation and cost recovery of that.

Basically I think that's all I can offer at this time.

COMMISSIONER PERNELL: Let me preface it, at least from my understanding, which is probably elementary in this arena, if there is no exit fees, everybody decides to bail, the question is what effect would that have on the reliability of the grid.

On the other hand, if there are exit fees that are too high, what does that do to distributed generation? So there has to be a balance, at least in my opinion, there has to be some type of balance. And that is going to be the policy issue that, you know, agencies are going to be struggling with.

But I can see that if there's no fee and everybody can bail and they can do distributed gen and they can save their company money, then that's the direction they're going to go in. Because that's, you know, that's their job, to figure out how to make a profit. Especially if it's a, you know, a stockholding company.

In the other side of that equation, though, which is when we begin to look at a multi energy mix for the state, if those fees are too high what do we do with distributed generation?

And that's an unfair question to you, but I'm saying that this is going to be the policy balance questions that someone's going to have to answer.

MR. ALVAREZ: I agree with the way you characterize it. It's a difficult balance. And the only thing that I can see right now is

basically if you took the one extreme, where you took all the load in the State of California disappeared, I guess system reliability would be nonexistent if all load was gone.

But the costs that were incurred to do that will still have to be recovered. So, -- but thinking of the other hand is, you know, a little bit more complicated.

And trying to get to that balance point, I think you're right, that's going to be the public policy question that we're going to have to wrestle with here in the next few months.

Thank you.

PRESIDING MEMBER LAURIE: Thank you, Manuel.

COMMISSIONER PERNELL: Thank you.

PRESIDING MEMBER LAURIE: Yes, sir.

MR. LANG: I'm probably just adding, you know, comments that have already been made, but the PUC on one hand is offering a 30 percent --

PRESIDING MEMBER LAURIE: We need your name again, please.

MR. LANG: Oh, sorry, John Lang, Kawasaki Gas Turbines.

The PUC is offering a 30 percent

incentive to do DG. And here we're going to come along and we're going to say if you do we're just going to kick the tar out of you. It's a non sequitur.

And I look at it from a manufacturer that provides a piece of equipment that provides for heat recovery for steam applications. So you're saying if you need process steam, and you elect to use a clean technology to do it, and the byproduct is electricity you're going to pay for it for the next ten years.

I think that, you know, the issue then comes back to those three comments made by one of the manufacturers in the state. Go to Mexico; install DG, or go out of business. We've just eliminate one of the three.

And I think that as the economic base is so important to us, by imposing these exit fees we're going to lessen the stability of our base. Because the people will, in fact, flight of capital, will move.

That's my only comment.

PRESIDING MEMBER LAURIE: Thank you, Mr. Lang.

MR. LANG: Thank you.

PRESIDING MEMBER LAURIE: Anybody else? Sir.

MR. GOLDBERG: Just want to make one quick comment. There's this --

PRESIDING MEMBER LAURIE: We need your name again, please.

MR. GOLDBERG: Dave Goldberg from American DG. There's this kind of nightmare scenario out there that if an exit fee is not imposed, then suddenly everybody is going to rush to put in distributed generation.

I think somebody needs a reality check on this. There's not enough capacity in the manufacturing sector. This is a complex process to impose in the applications. You're not going to see a huge rush.

You will, however, if you impose a significant exit fee, kill the distributed generation industry in this state.

That's all I'm going to say.

COMMISSIONER PERNELL: Do you think that if from a manufacturing standpoint that if there was no exit fees and ABC company had an opportunity to put in a cogeneration steam unit, that they would do it? Or wouldn't?

MR. GOLDBERG: People on a margin will always do it. These are complicated. The larger the systems, the more complicated they are. But even on small systems, you're looking at complicated engineering costs justification. Even in the current structure in California.

These are not slam-dunks. You don't simply walk around and decide you're going to be putting in cogeneration systems into various facilities.

Along with that you have an entire infrastructure issue that has got to be dealt with. Cogeneration is going to be a long-term project, distributed generation, in this state, if it's allowed to survive that will take many years to ramp up to reasonable levels.

This is really not a threat to the utilities in terms -- and is not going to be a major threat in terms of eliminating major amounts of revenue to the utilities and their overall structure.

I have difficulty, just tremendous difficulty picturing it. People simply do not turn on a switch and then suddenly 30 percent of the State of California in the commercial sector

is going to suddenly end up with distributed generation.

I mean somebody should really, I think, take a look at this. And as I said, I think a reality check on this issue is important.

COMMISSIONER PERNELL: And that wasn't a suggestion that it's either either/or. I'm simply making an analysis in terms of the policy question that has to be answered, and it has to be a balanced policy question.

MR. GOLDBERG: Oh, I agree with you 100 percent. But I think you're much more in jeopardy of killing distributed generation through the imposition of a significant exit fee than you are in terms of damaging the economic viability of the utilities or the amount of payback.

What you'll end up with is you'll end up with a longer period of time on a very slight marginal level in terms of recouping the revenues that you're looking for.

But in terms of the downside on it, I truly believe that you will kill distributed generation if you're not careful.

COMMISSIONER PERNELL: And my concern is the reliability of the grid for the state, not

necessarily any one industry in the state.

MR. GOLDBERG: I can't picture any significant impact on the grid, personally. I mean there are probably people who are more technically adept than myself, but I've yet to hear any significant arguments that the grid would be negatively impacted.

MR. SPEAKER: It would be more of a positive effect.

PRESIDING MEMBER LAURIE: Anybody else? Sir.

MR. BATMALE: Hi, J.P. Batmale again with RealEnergy. Just to speak to the scope of DG. DG less than a megawatt, I believe, is less than 2 percent of the total generation capacity of the State of California.

If it were to grow rapidly it wouldn't even begin to approach even a percent of the total load growth in the state. So I think in speaking to the comment before, it is a bit apocalyptic to think that DG will all of a sudden proliferate incredibly rapidly and just displace the utilities.

And getting back to the scope of the exit fees for departing load, I'm fortunately

doing research on departing load. Departing load, I found out, is actually defined in the code book as being generation that lessens total onsite energy usage.

So, while it's easy to characterize it and flip flop back and forth between different types, I think in looking at the total scope, it really boils down to a question of where does the Commission want to put the box. Do they want to put it around the technology and simply look at that, or do they want to put it around the market participant, a larger box, and the price takers and price givers going back to, you know, basic economics-101.

If you're looking at it from a whole box perspective, it is the whole panoply of onsite choices. It allows the price takers in the market to exercise some amount of control over the price they're given.

And we would obviously encourage a larger box. That's it, thanks.

PRESIDING MEMBER LAURIE: Thank you, sir.

COMMISSIONER PERNELL: Thank you.

PRESIDING MEMBER LAURIE: If no further

comment, the way the Commission responds to testimony, it's sometimes a challenging process because -- do we know, Scott, whether the proposed testimony is scheduled for hearing at a business meeting?

MR. TOMASHEFSKY: You mean our participation?

PRESIDING MEMBER LAURIE: Well, for adoption.

MR. TOMASHEFSKY: No, we adopt the basic principles and objectives that we would submit in testimony, and then we deal with that offline. So the testimony, itself, is approved by the Commissioners. But the principles are part of the issue intervention memo.

PRESIDING MEMBER LAURIE: And we've already talked about the principles, have we not?

MR. TOMASHEFSKY: We have, although we're going to come back next Wednesday with a more detailed outline of what our testimony would be.

PRESIDING MEMBER LAURIE: Okay. So, we're going to have a debate. And I have no idea what the views of the other Commissioners are. It will be interesting to hear if we think the

Administration has expressed a view, and then how that might impact our position on the question. I'm sure we're going to talk about that.

So, next Wednesday we will talk about those basic principles from which the testimony will follow. Once the testimony is prepared, there's not time to go back and have the Commission adopt the verbatim testimony, it'll simply be consistent with the basic principles previously adopted in a public setting. Okay.

You folks have been great. We very much appreciate your participation.

Commissioner Pernell?

COMMISSIONER PERNELL: No, I appreciate your being here, and I have always said and will continue to say, stay involved in our process.

PRESIDING MEMBER LAURIE: Thank you very much.

(Whereupon, at 1:20 p.m., the hearing was concluded.)

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CERTIFICATE OF REPORTER

I, VALORIE PHILLIPS, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Hearing; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing, nor in any way interested in outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 2nd day of June, 2002.